THE SECRETS OF UNDERGROUND MEDICINE

Natural Health Response

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FIGHT CANCER WITH THESE PROVEN NATURAL THERAPIES

Every year, nearly 2 million Americans are diagnosed with cancer. One person out of every three will receive a cancer diagnosis at some time in their lives — despite 21st century technology advances.

That's a surprising statement. But Western medicine's track record with cancer doesn't look so hot. Consider this:

- In the early 1900s, one in 20 people developed cancer.
- In the 1940s, one in 16 people developed cancer.
- In the 1970s, it was one in 10.
- Today, it's one in three!

How can anybody call this progress… it's beyond me.

Here's the kicker:

For decades, millions of dollars have been funneled into cancer research, yet here we are, with no official cure. It's easy to see why, when you follow the money.

According to the CDC, about 1,660,290 (1.66 million) new cancer cases are expected to be diagnosed in 2013. If overall death rates are falling, why are new diagnosis of cancer on the rise?

The answer is simple: The so-called 40-year "war on cancer" is a scam. The cancer epidemic has been a boon for the bank accounts of big pharma.

The typical cancer patient spends a whopping $50,000 fighting for his

life. Chemotherapy drugs are among the most expensive of all medical treatments, with some of them ranging from $3,000 to $7,000 for just a one-month supply.

When it comes to fighting cancer, it's been beaten into our heads that you need chemotherapy drugs, radiotherapy, diagnostic procedures, and surgeries. For most people, this is a frightening ordeal — just from the treatments alone which often cause awful side effects like nausea and loss of hair.

In spite of the enormous amounts of money socked into cancer research, two out of three cancer patients will be dead within five years after receiving cancer surgery, radiotherapy and/or chemotherapy. That's a lousy batting ratio if you ask me.

Here's another shocker most people don't know. A recent study estimated that chemotherapy benefits about one of every 20 people receiving it. And they call this modern day medicine? It sounds like stone-age medicine to me.

And yet — Mother Nature has natural cancer therapies and risk-reducers available that almost always benefit the overall health of the body. But there's one tiny problem.

All have been vehemently discounted, silenced, and pushed under the rug by the medical monopoly… who routinely persecutes physicians and researchers. The Feds come down on these good Samaritans like common criminals.

Take for instance Greg Caton, who was manufacturing anti-cancer salves that eliminated skin cancer tumors. The Feds planned to shut him down. So Greg left the country for Ecuador which by the way appreciates people who come up with cures. There, Greg could legally help the community with his treatment. However this didn't last long. The Feds found him in Ecuador, kidnapped him, and threw the book at him.

They don't want you to have other options to treat your own body. But we do.

Note: As with all therapies in this book, it's vital to undertake the anti-cancer measures listed below with the aid of a qualified health practitioner.

What Really Causes Cancer?

If This Nobel Prize-Winning Scientist's Theory is Correct, the Cure for Cancer May Already Be Within Our Grasp

What could be worse than a diagnosis of cancer?

That's easy… *enduring the way modern medicine treats it.*

Radiation and chemotherapy are like setting a house on fire to kill termites in the walls, hoping you can rebuild the place afterward.

And these painful therapies don't even work especially well. While tumors shrink at first, they tend to come roaring back.

"These therapies either are free or cost a tiny fraction of radiation and chemotherapy."

About 40 percent of Americans will be diagnosed with cancer at some point during their lifetimes, and while death rates for some cancers have declined, rates for others "have stabilized or even increased," concedes the American Cancer Society.

If we truly understood cancer's fundamental cause, death from all types would be in decline. But they're not.

A RADICAL HOPE

But now, a groundbreaking book explains that researchers may have uncovered the real cause of — and cure for — cancer.

Tripping Over the Truth: The Return of the Metabolic Theory of Cancer Illuminates a New and Hopeful Path to a Cure by science journalist Travis Christofferson reveals an amazing possibility.

If the researchers he profiles are right, treating cancer will become vastly more successful and absolutely harmless to the patient — in fact, as a result of treatment, you'll become *healthier than you were before you became ill.*

These therapies either are free or cost a tiny fraction of radiation and chemotherapy.

As if all of that weren't wonderful enough, these therapies also illuminate *the best ways of preventing cancer.*

THE WARBURG HYPOTHESIS IS BORN

To understand this breakthrough, we need to return to the 1930s and the brilliant German biochemist Otto Warburg, MD.

Warburg in 1931, the year he won the Nobel Prize in medicine.

After winning the Nobel Prize for his discoveries regarding how cells use oxygen, Warburg then turned his attention to cancer.

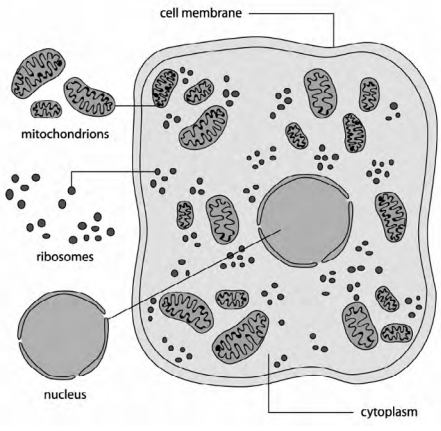
He began by examining mitochondria — the tiny biological "batteries" that provide energy within each cell.

Healthy mitochondria make fuel to feed the cell. They do it by using oxygen to break down a molecule called pyruvate. Pyruvate can come from

any macronutrient — carbohydrate, protein or fat.

But when mitochondria stop working properly, Warburg found, the cell, including its nucleus, stops getting the food it needs to function.

So out of what might be called desperation, the cell begins to do something odd, something that it "remembers" from when life began on Earth and there was no oxygen in the atmosphere.



A simplified single cell. Mitochondria — oval structures shown here in green — usually use oxygen to break down protein, fats and carbohydrates into energy. When they are damaged or deprived of oxygen, Warburg believed, they revert to an ancient way to make energy: breaking down sugar via fermentation. This inefficient process leads the half-starved cell to make "mistakes," including reproducing wildly — in other words, becoming cancerous.

It begins to ferment sugar — and only sugar — anaerobically. That is, without oxygen.

As Warburg famously put it, "Summarized in a few words, the prime cause of cancer is the replacement of the respiration of oxygen in normal body cells by a fermentation of sugar."

Fermentation, Warburg knew, is a *very inefficient way to make energy,* so the starving, sputtering cell starts making mistakes.

Instead of, say, a liver cell making more liver cells in a precise fashion (just enough to help a child grow or to replace liver cells that die), it begins *dividing furiously into mass quantities of random cells to ensure that some survive, just as its primordial single-celled cousins did.*

In other words, it makes a tumor.

CANCER'S SWEET TOOTH

Cancer's insatiable appetite for glucose (blood sugar) is well established, even by the mainstream.

In fact, to locate tumors within the body, physicians give patients pure glucose linked to a radioactive dye.

Cancer cells, hungry for the sweet stuff, gobble up this sugary marker,

thereby glowing brighter than other tissue and letting a scanning apparatus "see" them.

Cancer loves sugar. It's all it can eat.

But back in prewar Germany, Warburg lacked the sophisticated technology to prove that malfunctioning mitochondria led to this glucose-gorging behavior.

MITOCHONDRIA = BORING; DNA = SEXY

In 1953, James Watson and Francis Crick famously discovered DNA's shape. This ushered in a new age of *genetic* investigation in disease, especially cancers.

Cancer researchers became convinced this was the correct approach to take, and sadly, Warburg's metabolic theory was shoved aside.

Because cancer involves cells dividing rapidly and chaotically, scientists reasoned that cancer's cause, including its sugar lust, must somehow be woven into the nucleus' DNA.

To attribute cancer to an "upstream" cause — screwed up or missing mitochondria that "forced" the cell to survive via fermentation — just seemed too simple and crude.

Also, if one wishes to engage in speculation, Warburg's ideas would render cancer treatment profoundly unprofitable.

So the research money went to developing expensive drugs, which typically cost upward of $100,000 annually.

"And they don't even work," Christofferson told me. "Since the 1950s, cancer death rates really have not moved much at all."

SO WHAT'S THE DEAL? WAS WARBURG RIGHT?

Finally, a brilliant Johns Hopkins researcher named Pete Pedersen stepped up to see if perhaps Warburg had been right after all.

Using advanced microscopic imaging, Pedersen discovered just what Warburg predicted — cancer cells had a radically *lower number of functioning mitochondria than did normal cells.*

As Pedersen put it, "They're messed up. There are… all kinds of structural abnormalities."

To test the idea that sputtering, damaged mitochondria led to sugar-gobbling cancer cells, a fellow Johns Hopkins researcher injected 19 cancerous rats with an inexpensive, nontoxic compound called 3-bromopyruvate.

It "shuts the gate" on sugar's ability to enter cancerous cells.

All of the rats were cured and went on to have normal life spans.

Attempts to follow up that success with human studies have been mired in academic and political wrangling, though there are intriguing case studies of individuals who have seen dramatic remission with this therapy.

Other animal studies, meanwhile, have shown that radically low-carbohydrate diets (containing virtually no sugar or carbohydrates that can be converted to sugar) reduce tumor growth and improve survival in many types of cancer, including malignant glioma and cancer of the colon, GI tract and prostate.

WHAT "MESSES UP" THE MITOCHONDRIA?

Many things can damage mitochondria.

For example, you can inherit mutations, like the BRCA1 and BRCA2 abnormalities that boost the risk of breast and ovarian cancers. Toxins, radiation and other environmental factors such as smoking can also damage these little power plants.

"Cancer loves sugar. It's all it can eat."

And this is more speculative, but I find the evidence persuasive: A long-term diet of highly inflammatory processed carbohydrates can also damage mitochondria.

BOTTOM LINE

Please understand, Dear Reader, that the 1,200 words above are, of necessity, a vast oversimplification. If cancer is a part of your life, I urge you to read *Tripping Over the Truth* for a more complete, complex and nuanced explanation.

I would also emphasize that while animal and human trials of mitochondria-oriented therapies so far have been promising, they are as yet too few and too small to be anything but suggestive.

Also, the "mainstream" idea that faulty DNA is the primary cause of cancer — rather than a "downstream effect" of wonky mitochondria that starve the cell of energy — might also prove to be true, at least for some cancers.

But if the Warburg hypothesis as a major cause of many kinds of cancer is vindicated, it will be a tremendously hopeful development.

Because if the cause of most cancers is buried deep within the DNA of the cell, it will remain extraordinarily difficult to improve that situation and lower the risks or progression of cancer.

However, if cancer typically begins with impaired mitochondrial health, as Warburg suggested and modern research is confirming, there are many proven ways to boost both the number and efficiency of the mitochondria in our cells.

The Virgin Mary Cancer Therapy

Officially, it's a fermented wheat germ extract. But we like to use the name it was originally given by its creator, Dr. Mate Hidvegi. In honor of the Virgin Mary, he named it after the "Hail, Mary." Ave Maria.

He called it **Avemar**.

Before you can understand how this miracle drug works, it's important to understand how cancer works. Then you'll see why Avemar is so effective. Malignant cells that form tumors in the body use higher levels of glucose in order to grow. Because of this, pharmaceutical companies have focused on ways of inhibiting the cancer's ability to metabolize glucose. They believe if they can prevent these cells from breaking down nutrients, they can limit the growth of potentially fatal tumors.

Conventional cancer treatments like chemotherapy and radiation attempt to kill these cancerous cells before they spread and destroy the body. The problem with that, however, is that the treatment can't usually tell the difference between healthy and cancer cells.

That's where Avemar comes in.

Dr. Hidvegi's discovery targets the glucose metabolism of cancer cells. By preventing these cells from breaking down glucose, it prevents them from creating the building blocks of additional cancer cells, stimulating cell death in tumors. There have even been reports that Avemar helped increase weight gain in cancer patients, and made their bodies even more tolerant of traditional cancer treatments. Cancer patients who routinely use the product feel more energetic, experience less pain, and have an improved quality of life.

But that's not the only thing Avemar can do. It also assists your body's immune system in identifying and destroying foreign or abnormal cells in the body. Avemar suppresses a cancer cell's ability to release a masking agent that normally hides it from your body's white blood cells. Additionally, it's been shown to restore the body's bone marrow ability to create new red blood cells.

Avemar is a promising therapy, but should not be taken without medical supervision. Because its status as a legitimate therapy has varied wildly over time and between medical jurisdictions, and because the physicians

who prescribe it are constantly changing, it's important to do extensive research before even considering embarking on a course of Avemar therapy.

Cancer-Fighting Superfoods & Supplements

Avocados provide the body with many health benefits due to the high number of vitamins and minerals found within. How? They contain powerful antioxidants that help reverse the effects of many illnesses.

Contained within each avocado are plant chemicals known as "phytochemicals." This substance protects the body by reducing the risk of major chronic illnesses such as cancer. Phytochemicals in avocados also include lutein, glutathione and oleic acid. Lutein reduces breast cancer, while glutathione, an antioxidant, allows the liver to detoxify the body quickly and even reduce the effects of stress. Oleic acid, a healthy monounsaturated fat, lowers LDL cholesterol. This promotes a healthy heart, and helps prevent other harmful health side effects.

Vitamin E is also an important antioxidant for cancer prevention. When vitamin E is digested directly from a food source, it creates cancer-protective layers within the body that reduce the chances of developing cancer. However, vitamin E from synthetic sources (such as alpha tocopherol acetate), do not possess cancer preventive layers. Avocados are a true vitamin E source.

Known as "the Alligator Pear" in the south, this fruit reduces the risk of cancer when consumed with other healthy meals.

Did you know that taking vitamin E along with vitamin C can also reduce your chances of having a heart attack? These vitamins help expand and dilate your arteries and blood vessels, decreasing the chance of a major heart attack. In fact, take them before a fatty meal to decrease your chances of something bad happening.

THE SKIN CANCER BATTLING BEANS

Fava beans contain low amounts of saturated fat and cholesterol. But they're still loaded with vitamins and minerals you need to live a healthy lifestyle. Eating fava beans provides you with high concentrations of potassium, vitamin K, vitamin B6, magnesium, zinc, selenium and thiamin. It can also help prevent potential health ailments like neurological diseases, heart disease and cancers.

After the beans have been blanched and shelled, fava beans give you a ton of vitamins and minerals. In fact, one cup of fava beans contains

roughly 177 mg of folate, 44% of the recommended daily value for both men and women. Consumption of folate can help improve the nervous system, as well as the production of RNA, DNA, and even red blood cells. Foliate also creates a protective barrier in the blood stream and around organs, reducing the risk of cancer significantly.

The beans also contain a high level of fiber, supplying 37% of your daily recommended dietary value. A high fiber diet can reduce the chances of cancer by ensuring consistent bowel movements.

Likewise, soy isoflavonoids create a similar effect as fava beans because of its high fiber content. It goes a step further, however. Soy isoflavonoids lower the risk of breast, uterine, and prostate cancer by creating phytoestrogens, which promotes anti-estrogenic behavior.

THE NATURAL INDIAN CANCER-COMBATTING SECRET

Curry powder is another "super food" because it contains the substance **turmeric**. This antioxidant powder packs a powerful punch acting as both an anti-inflammatory as well as having anticancer properties.

"Curcumin" is a compound located inside of the turmeric spice. Studies have shown this compound helps reduce inflammation in the body. It's so powerful, in fact, it can help reduce pain and inflammation associated with osteoarthritis and rheumatoid arthritis.

However, its anticancer properties are what's most interesting about it. After several preliminary studies, curcumin has been shown to prevent colorectal cancers from forming. The compound seems to stabilize any malignant cells, stopping them from progressing any further. This then allows the patient to recover on their own.

Studies are still being conducted to confirm these findings. Regardless, there is a strong link between eating healthy portions of turmeric and reducing your risk of developing certain cancers.

A CANCER FIGHTER HIDDEN IN YOUR SPICE RACK

You most likely have this next natural anti-cancer agent in your pantry. We're talking about **black pepper**. This household condiment does more than season food. There've been documented cases of pepper strengthening a person's health and warding off diseases.

Recent cell research has shown that pepper also has anti-inflammatory, antioxidant, and anticancer properties. What makes this compound so powerful? The compound helps prevent certain cancers (like stomach

and colon cancer) from forming within your body. The more pepper you eat, the better your chances of fending off certain ailments and improving your overall health.

When eating black pepper, it's best to combine it with curcumin to increase the impact of both substances. In other words, you can enhance the anticancer and anti-inflammatory properties by eating them together. Eating it alongside epigallocatechin gallate (a substance commonly found in green tea) also boosts its potency.

THE CANCER-FIGHTER YOUR KIDS ALREADY LOVE

Red and green **grapes** are more than a sweet treat you feed your kids. This super fruit, including its leaves and sap, are used as a remedy for many diseases due to its high antioxidant power.

Grapes assist with cardiovascular ailments such as poor circulation and high cholesterol. You can even alleviate some symptoms associated with diabetes. Make sure you eat both the skin and the seeds to help prevent certain cancers from even forming. The fruit also has an antioxidant that inhibits the growth of malignant cells and may even cause a retrogression in certain cancers.

Many tests done on grapes, however, are still in the "preliminary lab" stages. Additional research is still taking place to determine why they help reduce the risk of cancers. Regardless, the proven cardiovascular benefits and potential anticancer properties should be enough of a reason to keep eating them.

FORTIFY YOUR PROSTATE WITH THIS COMMON VITAMIN

Vitamin C provides your body with an essential nutrient necessary for it to function. However, the body doesn't naturally produce this water-soluble vitamin. It's up to you to obtain the vitamin from outside sources. But don't worry, there are plenty of foods available that contain the essential nutrient.

Vitamin C improves your skin's complexion, blood circulation, strengthen ligaments, cartilage, and tendons and even promotes bone health. It will also reduce fevers, and shorten colds if you're unlucky enough to catch one.

Scientific studies on Vitamin C have shown that, if consumed via fruits and vegetables, it can help reduce the risk of developing certain types of cancer. These include: cervix, stomach, pancreas, esophagus, larynx,

rectal, breast, lung and colon. Studies have shown that people with high vitamin C diets have a 50% lower risk of getting cancer than those with low vitamin C diets.

While we're on the topic of prostate cancer, here's another simple way to decrease your chances of getting it. Eat more fat. Seriously. Conjugated linoleic acid (CLA) is formed after a change in the structural form of linoleic acid, a common unsaturated fat found in many foods. Studies have shown high levels of CLA reduce the incident rate of breast cancer by up to 50%. Spending a couple of minutes a day eating meats such as grass-fed beef high in CLA could save you the agony of having a swollen prostate in the future.

THE BUTCHER SHOP CANCER-COMBATTING SECRET

An unlikely food source in cancer prevention and inhibition is **beef liver**. Eat enough of it and it can actually reduce the number of free radicals in your body. These are harmful substances that form as a result of various chemical processes that occur in your body's different biological systems.

One slice of liver contains more than 420% of your daily-recommended value of vitamin A. This substance is a powerful antioxidant that lines the body with a protective layer and lowers the risk of certain cancers. It can also destroy any free radicals present in the body, helping you fend off potentially dangerous diseases. Since cancers are often caused by free radicals, eliminating them prevents problems from developing later on.

This type of meat is also high in riboflavin and vitamin B12. Combined with vitamin A, they eradicate free radicals and inhibit the growth of certain cancers. Just one or two servings a week can lower your cancer risk by as much as 50%.

Speaking of vitamin A, did you know one recent study showed that taking up to 1,200 micrograms could reduce your risk of developing melanoma, a type of skin cancer?

HOW A VIRGIN SCREWDRIVER COULD PROTECT YOU AGAINST CANCER

Recent scientific studies have shown that **oranges** play a significant role in reducing cancer development. Vitamin C, a major vitamin inside oranges and other citrus foods, is a powerful anticancer food. However, oranges offer more than just Vitamin C.

The pulp of the orange, also known as "orange oil," contains a

powerful phytonutrient known as limonene. Oranges and other citrus fruits such as mandarins, lemons and limes all have high levels of this phytonutrient.

Limonene stimulates the body's antioxidant detoxification system, preventing cancers from forming. Additionally, the phytonutrient reduces the activity of a particular protein that could cause an excessive growth of cells, reducing the chance of developing benign cancers. Eating oranges can help reduce cancer by up to 50% and should be a regular staple food in your diet.

If you are undergoing cancer treatment, ask your doctor about intravenous vitamin C infusion. High dosages of vitamin C administered in this fashion improved the quality of life and well-being of cancer patients.

THE ALL NATURAL POST-MENOPAUSAL RISK REDUCER

Vitamin B (in all its forms) provides a necessary balance of essential nutrients that help promote growth, development and other health functions in your body.

The various forms of vitamin B are: Thiamin (B1), riboflavin (B2), niacin (B3), pantothenic acid (B5), pyridoxine (B6), biotin (B7), folic acid/folate (B9) and cobalamin (B12). These vitamins fall under the "Vitamin C" category and help play a major role in enzyme activities, protein regulation, and turning food to energy.

Even after a series of randomized tests, no one fully understands why vitamin B reduces your chance of developing cancer. People with higher vitamin B levels have a better chance of living healthier, happier lives and have less of a chance of developing cancer in the future.

Consider taking a multivitamin to cover as many bases as possible. You can get all the nutrients you need in one tab, making it easy to remember and stay on schedule. On top of that, simply taking a multivitamin could reduce your chance of getting cancer by up to 12%!

POPEYE'S SECRET INGREDIENT

Maybe Popeye was onto something. The colorful cartoon you might have watched on TV when you were younger helped get millions of kids to eat their **spinach**. One can of the green plant would provide him with superhuman strength, giving him an edge over his rival Bluto, and allowing him to save Olive Oyl.

Spinach might not give you muscles like they did on the show, but it still has plenty of nutritional benefits. Enough to make it a part of your

everyday diet.

A recent study in Japan showed that glyconutrients, a substance found in spinach, inhibit cancer cell growth and tumor cell growth. The study also showed the nutrients were able to prevent the destruction of DNA in the body. Mice with colon cancer experienced a 56% decrease in tumor size in just two weeks.

Spinach can help prevent multiple forms of cancer, such as colon, ovarian, and prostate cancer. The more you eat, the better your body will absorb these important nutrients.

AN ASIAN DELICACY WITH CANCER-FIGHTING PROPERTIES

Mushrooms are one of the few edible fungus we know of. Some people might think they're "unpleasant" to eat because it's a fungus. But they couldn't be further from the truth. If you eat the right ones, such as Shiitake, this "super food" could provide you with a wealth of essential nutrients. Mushrooms provide you with the stuff that fights the progression of cancer and AIDS by aiding the body's immune system. In a clinical trial, shiitake mushrooms were able to reduce the harmful symptoms of a person diagnosed with advanced stomach and colorectal cancer.

Cancer-fighting substances are prevalent throughout the fungus. In its purest form, these same substances can be administered to current cancer patients to treat certain stomach and colorectal cancer.

Adding mushrooms to your daily diet, along with a healthy serving of fruits and vegetables can significantly decrease your chances of developing some cancers and help you live a longer, happier life.

YOUR LAST STAND DEFENSE AGAINST CANCER

Sutherlandia frutescens or **"cancer bush"** is an herb grown in South Africa and Botswana. When fully matured, these bushes reach up to one foot with distinct leaves and deep-red attractive flowers. Though valued by many for ornamental reasons, this plant is also used by locals as a potent cure-all immune system booster.

There have also been claims that it can fight AIDS, cancer, diabetes and other diseases. This has drawn the attention of scientists looking to understand its healing properties. One study showed the "cancer bush" was able to inhibit the growth of specific cancer cells by as much as 50%. Another study confirmed the plant's extract can kill carcinoma cells.

THE BABY BACK RIBS CANCER-FIGHTER

Formally known as "nigella sativa," **black cumin** has gained recent acclaim for being another potential anticancer food. Though this praise is relatively new, many people in eastern cultures have been taking advantage of its amazing healing properties for centuries.

Regardless, black cumin is a food filled with anticancer properties. A study in 1997 by the Cancer Research Laboratory showed black cumin was able to reduce tumor growth by 50%. Additionally it helped increase the growth of bone marrow by over 250%. Additional studies of the "miracle plant" showed that it helped prevent and inhibit the growth of the following cancers: pancreatic, colon, breast, cervical, brain, leukemia, oral and even liver.

The food possesses enzymes that protect the outer layers of all organs. The plant is not only able to inhibit the growth of cancer cells, but it could also reduce the size of the cancer and all but eliminate it.

THE "MANLY" DISEASE-FIGHTING DIET

When you think of a tomato, the first thing that might come to your mind is its color. The red pigment is a color unlike many others. Did you know you could find the same pigment in peppers? And did you know this pigment could potentially save your life?

Known as "**lycopene**," it's a powerful antioxidant with anticancer properties. Lycopene-rich diets (tomatoes only) were shown to result in lower instances of prostate cancer. Other promising results were shown with brain, cervix, breast, mouth, pancreas and even colon and rectum cancer.

Although studies still are ongoing to prove the validity of lycopene's effect on cancer cells, if you're a man, it might be a good idea to increase the number of tomatoes you eat. Just in case…

Fun fact: Red peppers actually have more vitamin C than oranges. Remember that the next time you go shopping and want a vitamin C alternative.

A CANCER REMEDY AND A WEIGHT LOSS SOLUTION ALL IN ONE

Up until the 1930s, Americans were losing the cancer battle. Now, however, America stands as one of the leading researchers and has made some incredible breakthroughs in scientific research with cancer cells.

It wasn't until the 1930s when someone discovered that a simple

change in diet could inhibit the growth of many cancerous cells. Known as "**alkaline therapy**" "(pH therapy), this diet provides you with an all-in-one cancer inhibitor. Researchers realized that a person with cancer had their pH levels lowered to 6.5 to 7.5 to make it easier for the cancer cells to grow. If you were careful about what foods you consumed, you could potentially alter the pH levels in your body. This might make it harder for cancer cells to reproduce.

A high acidic diet (lowering your pH level below 6.5) can effectively prevent the growth of cancer cells. Unfortunately, it also causes a lot of pain in cancer patients. Therefore, a high alkaline diet (raising pH levels above 7.5) can be used to help a cancer patient's body eliminate latent acidosis and increase pH levels.

The body immediately begins to send cancer cells into "self-destruct" mode and the death of them follows suit shortly thereafter. While this diet is not an official treatment, it can be seen as a possible method of remission for cancer.

AN 80'S WEIGHT LOSS SOLUTION WITH A CANCER CURING SIDE EFFECT

Grapefruit is another "super fruit" on the list of foods that may lower cancer risk. These fruits are so powerful that people who eat vitamin-C rich foods like these every day were shown to have a decrease in risk of cancer by as much as 50%.

What's their secret? They're high in vitamin C, a natural anti cancer vitamin. A healthy daily portion can give you enough vitamin C to inhibit the growth of cancer cells and add a protective layer around organs to prevent their future growth.

They also provide you with added dietary fiber that helps prevent colon and rectum cancer by adding a protective layer over it. Additionally, high fiber diets regulate the body and stimulate the colon and rectum, preventing the proliferation of further cancer cells.

But those aren't the only benefits you get from the fruit. Grapefruits contain carotenoids, an antioxidant that helps reduce inflammation and increase immune system function. And lastly, they also contain lycopene — another powerful anticancer antioxidant. In combination with other foods, grapefruit can be a staple in a healthy diet.

EGYPT'S $31 BILLION CANCER-INHIBITING DISCOVERY

Curcumin was described earlier as a component of turmeric, a spice native

to India and other regions around the world. **Curcumin** alone has its own anticancer properties. You can even double the effect of the substance if you combine it with green tea.

Green tea contains a component known as epigallocatechin Gallate (**ECGC**) which is known for preventing and inhibiting cancer growth. When combined with curcumin, the results are magnified. Curcumin allows the body to absorb a significantly larger portion of ECGC when it enters the body.

Curcumin and the high availability of ECGC helps reduce the risk of cancer by preventing the DNA replication process of cancerous cells. Cancer cells rely heavily on this process to grow quickly in the body. However, stopping this DNA replication can cause cancer cells to destroy themselves due to improper DNA replication.

The Only Cancer Test You Should Ever Take

Every so often, life throws you a curveball. Something you can never really prepare for. Sometimes, it's something as harmless as a fender bender on your way to work. But in the worst case scenarios, it could be something as bad as cancer. You can take measures to try to protect yourself from it, but life doesn't always work out that way.

Luckily, there's a test you can take that might give you an early head's up. It's called **ONCOblot**, and it's an early cancer detection kit. What makes this kit stand out from other competitors on the market is that it can detect certain cancers before clinical symptoms appear. For example, it focuses on things called ENOX2 markers. These are specific protein species in the blood produced by malignant cancerous cells. The test helps eliminate false-positives that other medical tests might give you.

Just a head's up. You're going to need a physician to prescribe ONCOblot for you. But this one test could detect up to 10 types of cancerous cells. Even better than the money you could save is knowing you could detect a possible cancer early on.

THE ONE CANCER TEST YOU SHOULD AVOID

You might want to hold off on your next prostate exam, even if your doctor recommends it. Most health insurance plans cover it, and it's recommended for men over the age of 40. But there are some things you need to consider before you do it.

There are certain things your doctor may not tell you prior to the test. Things you should ask about before you agree to anything. First, there's

an 80% chance the test will come back as a false-positive. Imagine all the added stress and panic you'll endure for a test that is wrong four out of five times.

Additionally, finding out you have cancer from a prostate test might not improve your chances anyway. The cancer grows very slowly and it's nearly impossible to detect.

Perhaps you should consider taking an ONCOblot test instead.

It's less invasive and more accurate.

Women may also want to be careful about mammogram screenings. A recent study done in the U.K. showed that some women may have had unnecessary treatment for cancers that were unlikely to kill them or spread.

The Laser Light Cancer Solution

Destroying cancer cells in the body should always be a top priority. Today, you could try a number of natural remedies or you can turn to modern medicine and technology. One modern option is **photodynamic therapy.**

This technology uses non toxic light-sensitive drugs to target specific diseased cells. Next, a specially designed laser targets the drug, altering it and making it toxic to targeted cells. This option is popular amongst people who suffer from throat or oral cancer.

This method can target and destroy precancerous and cancerous cells without damaging normal tissue. Chemotherapy and other cancer treatments can destroy malignant cells in the body, but are known to do significant damage to surrounding tissues and organs.

Profiting From Pain

It seems that cancer may be controlled, *even cured*, not via the hellish combo of chemo and radiation typical today… but rather through a combination of inexpensive, nontoxic diet and drug therapies that cut off cancer cells' supply of blood sugar, the only kind of fuel it can use.

The cancer starves and dies… *while the rest of the body becomes healthier.*

For details, see the next article in this book.

So what's been the holdup? Well, as *Forbes* reported in 2015, citing data from the IMS Institute for Healthcare Informatics:

"The global market for cancer drugs has hit $100 billion in annual sales, and could reach $147 billion by 2018…"

Now, let me be clear.

Do cancer researchers begin each day telling themselves, "I don't want to cure this disease, because it will put me out of business"?

I doubt it. Good people go into cancer research. During my career, I've been blessed to meet many of them.

No, the problem is more insidious.

The macronutrient in your diet that cancer cells use to fuel themselves is carbohydrate. Therefore, you should dramatically lower your carbohydrate intake.

However, if sharply restricting carbohydrates is the most potent weapon to fight cancer — who is going to fund the human trials that confirm *that*?

Not drug companies. Not the high-profit, centralized carbohydrate pushers who make up Big Food. They stand to lose billions.

The fact is low-carb-oriented anti-cancer therapies stand to benefit no one except *the millions who suffer and die from the disease.*

But there, ultimately, lies the hope: Cancer does not respect personal wealth.

If just a few philanthropists stepped up to the plate and funded clinical trials to defeat the disease that afflicts them or their loved ones, the world could finally have its confirmation.

In the meantime, the rest of us can help as well.

The Single Cause, Single Cure Foundation funds studies investigating metabolism-based cancer research with the aim of establishing safe, effective anti-cancer therapies.

Donating to this organization is a way for us "little guys" to do our part in relieving suffering for millions.

You can check them out at **www.singlecausesinglecure.org**. If you find it compelling, please donate. Because the foundation is a 501(c)(3) charity, all donations are tax-deductible.

Cancer's Kryptonite Revealed

Three Alternative Therapies That Stop Cancer Cells in Their Tracks

In *Tripping Over the Truth*, science journalist Travis Christofferson lays out a vision of cancer treatment that's dramatically different from the grueling (and often fatal) regime of surgery, radiation and chemotherapy used today.

Cancer patients would be treated with a combination of three therapies:

Nutritional Ketosis: Because cancer cells have reverted to a state in which they can eat only sugar, the first line of treatment is a diet with *virtually no carbohydrates*. That means no sugar and no starch, which the body converts to sugar.

Such a diet consists of meats (including nutrient-dense organ meats), fish, eggs, nonstarchy vegetables and plenty healthful added fats such as quality olive oil, coconut oil and butter from grass-fed cows.

Deprived of sugar, the body's cells have no choice but to fuel up with fat, or, more precisely, a breakdown product of fat called ketones — and *only noncancerous cells can consume ketones.*

So the aim should be to drive blood sugar down to a steady level of approximately 70–80 mg/dl, and blood ketones to 2–4 millimolars. Dr. Thomas Seyfried, a leading researcher of the metabolic theory of cancer, calls this the "therapeutic zone."

It's the zone that starves cancer cells yet is healthy for normal cells, perhaps even healthier than their normal, sugar-driven state.

So how do you track blood sugar and ketone levels?

Another prominent researcher, Dom D'Agostino, recommends using the Medisense Precision Xtra blood glucose and ketone monitor (Abbott Laboratories), available at drugstores including CVS and Walgreens.

Monitor before breakfast and about two hours after lunch and dinner. Keep a log to see which foods spike your glucose, and then avoid them.

"If you want to prevent cancer, a diet low in carbohydrates, especially sugar, is vital."

"Everyone has a unique metabolism, so no two diets will be the same," says Christofferson.

Metabolic Drugs: Inexpensive drugs such as 3-bromopyruvate, known as 3BP, have an uncanny ability to "shut the doors" on sugar's entry into cancerous cells. They are also inexpensive but should be administered only under an oncologist's supervision.

Hyperbaric Oxygen Therapy: Bathing cancer cells in oxygen at high pressure can prevent the cells in oxygen-starved tissues from becoming cancerous. It also boosts production of free radicals — electrons that attack and literally explode relatively weak cancerous cells.

BOTTOM LINE

The cancer treatment centers of the future would offer all of these in unison, perhaps along with other simple, nontoxic therapies aimed at

increasing mitochondrial health, such as controlled periods of fasting and exercise programs, which have been shown to improve *both the number and quality of mitochondria in cells.*

"That's the dream — that you come out healthier than you were," says Christofferson.

In the meantime, if you or a loved one is facing cancer, find *an oncologist who is at least familiar with the metabolic theory of cancer* put forth by Warburg, Pedersen and Seyfried. Unfortunately there is, as yet, no database of such oncologists — you must "ask around," which I'll concede is a challenge.

And if you want to prevent cancer, a diet low in carbohydrates, especially sugar, is vital. Exercise is also crucial, as cardiovascular conditioning keeps the cells bathed in ample oxygen, lowering the odds they will "resort" to anaerobic sugar fermentation… in other words, cancer.

Stay tuned. This story is developing rapidly, and desperately needed large-scale clinical trials are planned. I'll keep you posted.

PAIN-FIGHTING SECRETS EVEN MOST DOCTORS DON'T KNOW

Based upon the findings of a report from the Institute of Medicine, more than 100 million Americans suffer from chronic pain at a cost of around $60 billion a year in medical treatments and lost productivity.

Surprisingly, that number is expected to rise higher as baby boomers age. That being the case, by 2030, 40 percent of American adults will suffer some sort of arthritic disease.

Wait, how can this be? The FDA and big pharma claim their approved solutions are the only legitimate way to treat pain problems. These guys are like professional con artists.

Here's something these guys hope you don't ever find out…

Today, prescription drugs are the second-most abused category of drugs in the nation. Prescription painkillers are a major contributor to the total number of drug deaths in the country.

And the estimated number of emergency department visits linked to non-medical drug use of pain relievers nearly doubled between 2004 and 2009.

Addiction cases are growing. In 2010, about 12 million Americans age 12 and older admitted to non-medical use of prescription painkillers in the past year. This probably includes painkillers like OxyContin.

Ok, many people feel they get some benefit from painkillers. Fair enough. But the opiate kind, the high powered stuff can cause addiction. Trust me, you don't want that.

The side effects of these painkillers makes it seem like you're trading one type of pain for another. Just look at these potential side effects:

- Agitation, seizures, hallucinations.
- Lowered blood pressure and heart rate.
- Muscular rigidity and contractions.
- Nausea and vomiting.
- Non-allergic itching.
- Pupil constriction.
- Sexual dysfunction.
- Urinary retention.

Are you kidding me?

Look — you don't have to settle for a life of popping painkillers just to get through your day.

Fortunately there are natural remedies the drug companies don't want you to know about that could alleviate your pain, safely, without addiction.

THE "WALK IT OFF" PAIN SOLUTION

"Walk it off." If you've ever hurt yourself playing sports, you've probably heard this before. It might sound insensitive, but there's evidence that shows there's some truth to it. In fact, someone telling you to walk off an injury might be the best advice you get.

The more physical exercise you do, the better you'll be at warding off pain. When you're up walking and being active, your body naturally releases endorphins. The more you walk, the more endorphins are released into your system. This helps stimulate your body and produces what many people call a "runner's high."

On top of that, physical activity can help put you in a better mood. The better mood you're in, the less likely you'll notice or experience any pain. Eventually, you could train your body to endure even higher levels of pain by becoming a stronger overall person.

"MIND OVER BODY" MENTAL TRICK TO ELIMINATING PAIN

Another phrase you might have heard if you played sports is "No pain, no gain." If you don't work hard for what you want most, you won't achieve

your goals. How can you do this, however, if you're constantly facing pain every day.

That's when you need to take a "mind over body" approach. It's a natural remedy that requires you to take control over pain through willpower. Your body sends out a signal to your brain when it's in pain and centralizes it to a specific area on your body. When this happens, you need to train your brain to ignore or minimize these signals. Reducing your brain's ability to recognize these pain signals won't happen overnight. It requires practice. You might want to look into trying yoga for some of their pain management techniques.

When practicing yoga, you're training yourself to separate your mind from your body. Once you unlink the two, the pain slips away. Not only will yoga provide many health benefits for your body, it could be the secret to ridding yourself of constant pain.

CANCEL OUT BACK PAIN WITH THESE 5 MAGNIFICIENT INFLAMMATION FIGHTERS

Chronic inflammation can be debilitating to a person. Sometimes the pain is inevitable and medicine is the only way to make it manageable. But did you know there are things you can do right now that can help fight inflammation naturally? You could buy these solutions over the counter without a doctor prescription and bring temporary relief without downing a bunch of chemicals and pills. Here's 5 tips to making your life a little more pain free.

- Take advantage of fish oil and other products high in Omega 3. Omega 3 supplements assist the body with naturally reducing inflammation. It minimizes chronic inflammation and reduces pain and suffering significantly.
- Eat fermented foods, specifically carbohydrate-oriented foods. These foods help your body by supplying it with probiotics, friendly bacteria that assist with fighting the causes for inflammation. Even better, the probiotics target the gastrointestinal area, where 70% of your immune system cells are located.
- Take plant enzyme supplements. These enzymes help your body repair damaged cells that cause inflammation.
- Drink the right amount of water. Water helps your body function and can decrease the amount of inflammation from dehydrated cells.
- Take Omega-6 supplements. Foods rich in Omega-6 give your body

more pain relief since most supplements high in Omega-6 contain high levels of Omega-3, another inflammation reducer. Omega-6 can also completely reduce the first stages of inflammation.

THE SWEETEST ANTI-INFLAMMATORY ON THE MARKET

If you've been experiencing pain for a considerable amount of time, you've probably tried countless remedies to rid yourself of it. But did you know about the one pain remedy that could be sitting in your fridge right now. **Cherries**. This fruit has potent pain reducing qualities that few people are aware of. They help reduce general pain, sore muscles, and even gout.

The secret behind cherries is that they help reduce inflammation. Less inflammation in the body leads to fewer pain signals sent to the brain. You could consume this either by eating the food directly, or taking capsules which speed up pain relief.

If you're faced with constant soreness, you'll be happy to know the fruit helps relieve that pain as well. Cherries act as an amino acid and help synthesize the growth of protein in the body. The more "completed proteins", the quicker the soreness relief.

As mentioned before, cherries can help relieve pain caused by gout. It also helps with problems associated with fibromyalgia. The fruit is lower on the glycemic index, making it a great source of melatonin. This substance helps reduce pain and give you a good night sleep if you've been having trouble at night.

THE SUPER VEGETABLE THAT CAN STOP ARTHRITIS IN ITS TRACKS

When you were a kid, you might have hated **broccoli**. But did you know that the once hated vegetable is a secret cure for arthritis pain? Some scientists have been testing the substance sulforaphane found in broccoli. They believe it could help strengthen the cartilage in your body.

If you currently suffer serious pain from arthritis, a long term diet of the green vegetable could help decrease pain. You'll notice the pain will become more mild and fade faster than before. This is because broccoli will help prevent a certain enzyme that damages cartilage from ever forming. It also helps decrease inflammation in the body.

Adding a healthy portion of broccoli to your diet could be one of the simplest steps to reducing pain and living a healthier life.

MAKE FIBROMYALGIA DISAPPEAR OVERNIGHT

Similar to walking, when you dance, your body relieves tension as it releases endorphins. When endorphins enter your body, you might feel a "runner's high." Constant **dancing** will also reduce the amount of soreness in your body as it gets used to it. The movement will help stretch your body and make your limbs more flexible. As you begin stretching the bones, muscles, and tendons in your body, you'll begin to feel less pain.

Dancing is a great short term solution to any pain you might be feeling at the moment. If you have constant pain, adding a moderate level of dancing to your daily exercise could help immensely.

Hiring a dance teacher might be the best way to deal with long-term pain. They can teach you new ways of stretching your body and decrease pain. Certain dance moves might actually help prevent pain from even starting in the first place.

DON'T TRUST YOUR GUT

A common ailment amongst people all across the world, leaky gut syndrome is caused by damage to the linings of your bowel. A small hole in the intestine can cause food and other waste particles to seep through the gut and into the bloodstream. Depending on the amount of undigested food, bacteria, viruses, and toxic waste that seep into your system, you could experience various levels of pain throughout your body.

As the hole in your intestinal lining grows, the symptoms can worsen, as more and more dangerous materials escape into your system. Getting tested for **leaky gut syndrome** is the first step towards mitigating the pain. Once you're aware of the problem, inflammation and pain can be reduced almost immediately through proper treatments and/or surgery.

WHAT CANDIDA ALBICANS CAN DO TO YOUR INSIDES

Candida Albicans is a harmful yeast that can find its way into your digestive track. It can cause both oral and genital infections in your body. Friendly bacteria in your system help keep your digestive system clean by feeding on and eliminating this yeast.

Certain medical treatments, such as antibiotics, chemotherapy, birth control, and cortisone lower the amount of friendly bacteria in your system, which promotes the growth of Candida Albicans. If the yeast is allowed to grow unchecked, it can travel throughout the body and damage various

organs, your skin, and even your sinuses.

Checking to see if you have this harmful yeast in your body is simple. When you wake up tomorrow morning, before you eat or drink anything, spit into a cup of water. Come back and check every 10 minutes for the next hour. If you have candida albicans in your system, the water will appear to have strings dripping from the surface and have cloudy specks just below it. Your saliva will also sink to the bottom of your cup.

If your saliva doesn't sink and you can't see any string-like legs, then you most likely don't have the yeast in your system.

DON'T LET THIS DANGEROUS SUBSTANCE BUILD UP IN YOUR BODY

If you eat a lot of fish, then you're going to want to pay extra attention. One of the biggest problems with seafood diets today is the high level of mercury that makes its way into your food. Most of the time, **mercury** poisoning can be very difficult to cure, and most people don't know they have it until it's too late. You could avoid this danger by skipping out on seafood altogether, but there is another option available.

Mercury poisoning can be treated through mercuric chloride and chelation therapy. Though you should know that weaning your body off this poisonous substance until you're completely clean can take a long time. We're talking months to years, depending on how long you were exposed to the substance. Consult with your doctor before you decide on any form of treatment.

Don't let mercury poisoning prevent you from adding fish to your diet. Adding just one meal of fish to your weekly diet could provide you with a number of health remedies. It could even prevent you from going blind!

SOME OSTEOARTHRITIS PAIN RELIEVERS

Do you suffer from arthritis? Wear and tear of your joints over the years can lead to this debilitating condition later on in life. But did you know there are natural remedies for pain caused by osteoarthritis?

Here's a number of things you can do today to help relieve pain:

- Shed Some Pounds — Losing weight is one of the simplest ways to help relieve stress on your aching joints. Did you know that for every pound you lose, you take almost 4 pounds of pressure off your knees? You might even see all your symptoms disappear if you drop 10 to 20 pounds.

- Start exercising — It might be tough at first, but coming up with an exercise routine could pay huge dividends in the long run.
- Get Over Your Fear of Needles — Acupuncture could help loosen the body and relieve stress. Some people with chronic pain found relief after trying out this ancient Chinese medical treatment.
- Glucosamine — Though there's no concrete scientific study confirming its benefits, those who take it claim it helped assist in relieving pain. Recommended dosage is 1,500mg, once a day.
- Fish or cod liver oil — A great all around natural supplement that could provide your joints the pain relief that can get you through the day.
- Chondroitin — Taking 800 to 1,200 mg a day, coupled with glucosamine, will give you the best results and could slow arthritis progression. It's a safe drug, with no side effects.
- Capsaicin cream — a topical cream that provides almost instant pain relief for muscles and joints. It's made from the same stuff that gives chili peppers its heat.

These solutions might help in the long run, but if you need fast acting joint and pain relief (we're talking within 45 seconds), check out Serenity Oil Blend by The Secrets of Eden. Apply a few drops on the part of the your body that's bothering you, rub it in, and it will block the pain receptors in less than a minute.

THE REAL CAUSE OF YOUR JOINT PAIN

Sometimes that "joint pain" isn't necessarily joint pain. It could be pain coming from the tendons that within the joint. This pain could be caused by either **tendonitis** or **tendonosis**. The former is caused by inflammation of the tendon itself, while the latter is a condition where there is damage in the tendon at the cellular level. Both of these are detrimental and are often mistaken for ordinary joint pain.

Tendonitis is a rather rare condition that can take several weeks to heal. Tendonosis, on the other hand, is less severe but can persist for a much longer time. Usual recovery time for tendonosis can be several months, and even up to a year. Both problems need to be addressed and treated early on to avoid future complications.

Additionally, you should try to discover what may have caused this problem to develop in the first place. Something as simple as an old pair of shoes might create added stress on certain joints, causing damage to

specific tendons. Finding the source of the problem is just as important as treating the pain it causes.

NATURAL BONE BUILDERS YOU CAN START TAKING TODAY

Women tend to have more bone and joint problems than men. Chronic pain caused by arthritis is just as much a problem for females as they are for males. Regardless of your gender, natural bone builders can help restore bone health and maybe even alleviate nagging symptoms and other degenerative diseases. Here are a few tips that might help with any pain you might have:

- Eat foods high in calcium — This also includes milk and orange juice. You can also take supplements, but make sure they're not the only source of calcium in your diet. You need to also eat real food.
- Eat foods high in vitamin D — This nutrient promotes healthy bones. Combined with calcium, they help build stronger, more resistance bones and joints.
- Leafy greens — If it's green, it's good to eat. The green pigment in certain vegetables indicate that they're a "miracle food" that provides your body with essential nutrients. In particular, they contain high levels of calcium, vitamin K, potassium, and other vital vitamins and minerals.

Keeping your bones healthy might be difficult, but that doesn't mean it's impossible.

Calcium is great, but don't rely too much on it to help build and regrow bones. Making sure you take enough magnesium is just as important in keeping your bones strong and healthy. In fact, a translation mistake in a French study led to the misconception that you need twice as much calcium as you need magnesium. The correct ratio of calcium to magnesium is 1:1.

HOW TO MAKE MIGRAINES OPTIONAL

Pain so bad you can't see. Sound is amplified to a level where you can barely function. The smallest tasks become practically impossible. Words can't accurately describe the anguish of a migraine headache. But fortunately, there's a simple natural remedy you can take that doesn't require a doctor's prescription.

It's called **Wild bergamot,** and it's actually part of the mint family. Native American groups used this herb for a number of ailments, such as cold relief and to fight bronchial infections. It's also been used to help prevent and eliminate headaches before they become debilitating. Keep it in mind the next time you're at the drugstore. It could mean the difference between a splitting headache, and a calm uneventful afternoon.

While we're talking about herbs, here's a list of them that lower your chances of getting diabetes: cinnamon, cloves, cilantro, coriander, cumin, fenugreek, ginseng, sage, turmeric, and lemon juice.

END MENOPAUSE MISERY

Joint and muscle aches aren't the only the types of pain you might encounter in your life. As you get older, your body's chemistry changes. And if you're a woman, you eventually have to deal with menopause. But the pain caused by the changes of hormones in your body doesn't have to be something you just grit your teeth and bear. People in societies all throughout history have dealt with the same issues, and they've discovered natural remedies that helped mitigate some of the worst symptoms.

Here is a list of herbs you can take that will help get you through some of the worst pain:

- Black Cohosh — Especially helpful against hot flashes.
- Dong Quai — Used in traditional Chinese medicine to treat gynecological conditions. Should not be used by women with fibroids or blood-clotting problems.
- Ginseng — may help with mood related symptoms and lessen sleep disturbances.

COULD THIS BE THE STORY BEHIND YOUR "JOINT PAIN"?

As we grow older, it seems as though we're destined to experience joint pain. On the golf course, in the garden, climbing up and down stairs, even getting in and out of our chairs. We're bracing ourselves for that sharp pain, and are resigned to just push through it.

But, the truth is that pain might be an indicator of something else—tendinitis.

Tendons are the dense, cord-like tissues that connect our muscles to our bones. They're found all over the body, but tend to take the most wear

and tear in places like our hands, wrists, elbows, shoulders, knees, ankles, and feet.

As we age, our tendons become less flexible, and it's easier for us to injure them (especially if they're overused). The inflammation caused by injury to a tendon—whether that injury is a from a single, traumatic event or chronic overuse—is what causes tendonitis.

Joint pain and tendinitis are painful enough that they tend to discourage us from being active. Movement causes pain, so why not avoid it?

The truth is, you could be doing yourself more harm than good. Research shows that exercise actually has a positive impact on joint tissues, particularly if it helps you lose weight. Being overweight puts an additional stress on our joints, one that's harder for them to bear than the tendonitis, arthritis, or joint pain itself.

Harvard Health Publications reveals that "the right set of exercises can be a long-lasting way to tame ankle, knee, hip, or shoulder pain".

While irritating the affected joint is not recommended, you should take care to strengthen the muscles around it. Focus on gentle stretching and strengthening exercises, rather than going for a long run or something equally as stressful.

Exercise has also been found to relieve arthritis pain. In one study, 28 patients with rheumatoid arthritis practiced weight training for 24 weeks. Their function was improved by up to 30% as a result.

Long story short, the best way to prevent joint pain is to remain active.

Easy and Natural Pain Relief

Perhaps more than anything else, aches and pains are the biggest sign of aging.

Most of us don't like to admit we're getting older. Your face in the mirror has probably changed drastically over time, but seeing it every day makes those changes almost imperceptible.

What is glaringly obvious, however, is the way you feel.

Getting out of bed just a little bit more slowly… Feeling the pain in your knees every time you have to go up or down a flight of stairs… Unable to spend as much time in the garden, because your back and hands begin to ache as you tend to your plants.

Whatever your particular struggles might be, you've probably grown to accept them. We've all laughed with our friends about it — "My back aches when I wake up. I must be getting old!"

The truth is, you don't need to resign yourself to feeling worse as you grow older. In many cases, those aches and pains can be prevented, rather than accepted.

Let's dive into some of the best, natural pain solutions out there.

RELIEVE JOINT AND BACK PAIN WITH THIS ANTI-INFLAMMATION MIRACLE

In 2014, *Laissez Faire Club* director Doug Hill began experiencing joint pain due to a racquetball incident.

The pain was especially acute when he walked down the stairs and got out of his car. In fact, it had magnified so much, so quickly… he was afraid this pain would be with him for the rest of his life.

Doug tried a simple diet suggestion: Stop eating sugars and grains.

Doug agreed to cut carbs from his diet. And the results?

Within three weeks, his knee pain vanished. Doug can now bound up and down the stairs with nary a twinge.

The unfortunate thing is 99% of Americans have been deceived by the government and health experts into thinking this type of food is the most important part of your diet… which is yet another cause for the epidemic of joint agony today.

The Agriculture Department's food pyramid has been instructing Americans to eat between six–eight servings of grains and other carbs every day.

Grains contain something called dietary lectins, which contribute to joint inflammation and even arthritis. Lectins are able to cross from the gastrointestinal tract into the rest of the body very easily.

There's actually a long history of arthritis being associated with gut inflammation, particularly in patients suffering from Crohn's disease and celiac disease. As a result, researchers have set out to determine whether or not a dietary change would impact not only the intestinal symptoms of those conditions, but also the arthritic symptoms.

In a study published by Cordain, Toohey, Smith and Hickey in the British Journal of Nutrition, it was found that eliminating lectins not only helped patients suffering from these intestinal autoimmune diseases, but also relieved the rheumatoid arthritis that was associated with their conditions.

Other research published by the Department of Rheumatology at Karolinska University Hospital in Sweden found that removing gluten from the diet also helped to relieve symptoms of rheumatoid arthritis. Dietary changes are more frequently being prescribed as a remedy for joint pain, as

science continues to prove that what you eat affects how you feel.

And just to be clear, even though we've focused on grains in this article… this does not give anyone license to binge on simpler sugars.

As you may know, grains are, at their core, composed of carbohydrates. Sugars are just another form of carbohydrates. As a result, consumption of both grains and sugars will lead to the same inflammatory reaction.

When you eat carbs, your body releases insulin. And you're probably all too familiar with the energy spike and subsequent crash.

But the results don't stop there. Over time, too much sugar consumption can lead to chronic inflammation.

This phenomenon goes back to your body's classic "fight or flight" reaction. Too much sugar sends signals to your body to "fight." When you're ingesting sugars round-the-clock, your body is fighting far more often than it can handle. At that point, inflammation — which is usually a good thing in the healing process — can become chronic and lead to a whole host of health issues. Joint pain is just one example.

Long story short, sugars and grains can and will lead to inflammation in the body. Remove them from your diet and you'll be shocked at how quickly you see the changes.

Just ask Doug.

The changes are simple, really. He just cut bread and pasta from his diet and the results were extraordinary. You can work your way up to removing other grains and sugars as well — it will all lead to better health for you.

And as an added benefit, you can lose weight too. Doug lost just over 10 pounds after cutting a majority of the pasta and bread from his diet.

He cheats now and then, just like we all do. But after a few weeks, Doug swears that it becomes easy. Once your body adjusts to the change and your knees stop screaming in pain, you won't think twice about the foods you're not eating.

THE ARMY SERGEANT'S SECRET FOR ELIMINATING JOINT PAIN

The human body is fragile.

To survive, we must exist in a delicate balance. This includes everything from the air we breathe to the nutrients in our foods, the chemical composition of our water, and even the gravity that our bodies are exposed to.

If one link in the chain is out of whack, we can suffer… and usually do… as a result.

This is especially true when it comes to your joints. The bad news is if you have a single muscle that becomes chronically tight, the delicate balance of your joints becomes disturbed. This can happen if one muscle becomes overly strong or weak compared to the rest. When that happens, other muscles tighten to compensate, your movement changes, and it starts to affect your other joints.

Think of it like an imbalanced wheel well: The faster you drive, the more you begin to wobble, risking a blown tire or worse.

The good news is if you correct this simple muscle imbalance, everything else can fall back into place.

The question is how do you identify this imbalance and correct it?

Laissez Faire Club director, Doug Hill, was faced with this exact challenge a year ago and didn't even know it.

What Doug did know was his shoulder hurt — the painful result of pushing his body out of balance by sitting at a desk and driving long commutes for years and years.

At first, he went to physical therapy every week and coughed up $150 a pop for the privilege. Then they wanted him to do 90 minutes of stretching per day on his own!

Doug said no thanks and looked into different ways to heal his shoulder.

His friends recommended an unusual treatment from a retired army drill sergeant. Doug was hesitant at first, but the discomfort won out and he was willing to try anything.

The secret? Deep-tissue pressure point massage.

During his first session, the drill sergeant-turned-therapeutic massage therapist explained, "I spent 20 years breaking bodies down… so I figured my new calling would be building them back up again."

Within the first few minutes of trying out this easy treatment, Doug felt an indescribable "release" and relief in his neck and shoulder. He instantly knew there was something to this method. And after just a handful of once-a-month treatments (which were far cheaper than the weekly time-consuming physical therapy), his shoulder regained the flexibility and strength it had lost.

The whole process was so relaxing and invigorating, he practically thought of it as a "guilty pleasure!"

The good news for you is this treatment is available all over the country. You've just got to know who to ask for and exactly what you want done.

This particular form of massage is a very different animal from what most people think of when they think of massage: lazily enjoying yourself

as someone splashes you with a hefty dose of essential oils, gossip and New Age music.

Deep tissue massage focuses on realignment, working on your connective tissue and layers of muscle. It's designed to provide relief from pain and aches. By relieving the muscles, the connecting areas of the body (shoulders, knees, hips, neck) are relieved as well.

When done correctly, it can be a rather intense experience. During Doug's first session, the former drill sergeant methodically squeezed and massaged his shoulder and neck muscles, following the fibers to see where the pockets of tension were.

Once he found them, instead of going gentle, he'd squeeze more until…

… the muscle relaxed and the tension evaporated.

Over the course of a few sessions, Doug's shoulder realigned because tight muscles were no longer pulling it out of whack. As a result, his pain vanished.

His case isn't isolated, either. I'm sure you've heard from friends, family and co-workers how a good massage can feel like a miracle. And science is beginning to back these feelings up.

Studies have shown that therapeutic massage is a safe and beneficial treatment for chronic neck pain. It has also been tested as a treatment for lower back pain and knee pain, both with positive results.

In research published by *Science Translational Medicine* in 2012, it was concluded that "massage therapy appears to be clinically beneficial by reducing inflammation and promoting mitochondrial biogenesis."

A general review of massage-related studies published by the University of Miami's School of Medicine also revealed that massage was able to help with the symptoms of depression, autoimmune conditions and stress, decreasing cortisol levels while increasing the levels of "feel good" neurotransmitters like serotonin and dopamine.

And a study conducted by doctors in the Ann Arbor Healthcare System for the Department of Veterans Affairs concluded that a 20-minute back massage each evening helped relieve pain following major surgery more effectively than pain medication alone.

Luckily, deep tissue massage is relatively easy to find. We recommend reading online reviews and finding those in which the reviewers affirm the massage therapist "knows what they're doing." This key phrase signals the practitioner works to find release points, rather than provide a gentle but ultimately pointless experience.

Don't suffer any longer. Treat yourself to a deep tissue massage and be amazed as your pain evaporates.

SCIENCE OF LIFE MASSAGE

Turns out, they've been using massage as a medical treatment in India for thousands of years.

The Guardian recently did a report on Ayurvedic treatments. Ayurvedic means "science of life," and is an ancient Indian practice.

The basic principle, according to ayurveda-in.com, is that "the human body consists of three primary life forces or biological humors, which are Vatha, Pitha and Kapha. These three doshas are called the tridoshas. A balance among these life forces is essential for proper health. Any imbalance among the tridoshas causes a state of unhealthiness or disease."

The process to regain that balance can be an intense one. One treatment is a 90-minute massage, during which the patent lies on the floor covered on oil while a masseuse hangs from a rope and stamps all over their body.

Not your usual, relaxing spa experience by any means.

But once they're through pounding the knots out of your back and your limbs by the end of the session, you might be singing a different tune.

STRENGTH AND FLEXIBILITY OF A PRO ATHLETE

Watching an NFL football game is always a bit of an awe-inducing experience.

Every play, it seems, someone ends up on the ground. They catch the ball and are inevitably forced to the ground by a man who is roughly the size of a grizzly bear. The impact is so great that you can hear it from your living room. And yet, nine times out of ten they hop right back up and line up for the next one.

NFL athletes manage to twist and turn their bodies to catch the passes thrown their way, soaring through the air, dodging the defensive line and outrunning their opponents to get the job done.

How do they do it? Is it insanity, or just pure athleticism? Whatever it is, most of us certainly don't have it. Particularly not those of us who are well on our way to old age.

Luckily, there is something you can do to get the strength and flexibility of a professional athlete, without the nagging pain of injuries that they usually suffer.

The secret is yoga.

This secret practice does wonders for pain relief, and is being recom-

mended more and more. Kelly McGonigal, PhD, is the author of *Yoga for Pain Relief,* specializing in the mental and physical sources of pain.

She recommends practicing yoga to help relieve chronic pain. Through a combination of relaxing, strengthening poses and deeply concentrated breathing techniques, it is possible to overcome both physical and mental pain.

Suffering from a tight, aching back or painful joints does not need to be your daily reality, even as you grow older. Give yoga a try and watch yourself be restored to a younger, leaner, more flexible version of yourself.

The World's Fastest Painkiller

Pain is a signal your brain sends to let you know something may be wrong. It manifests in many ways, from a dull soreness to a sharp pang to a pulsing ache. Sometimes pain is merely uncomfortable. Other times, it can be debilitating.

There are two types of pain: acute and chronic. The distinction between the two determines how the pain is treated — if it's indeed treatable. To clarify:

Acute pain is provoked by a specific disease or injury, serves a useful biologic purpose, is associated with skeletal muscle spasm and sympathetic nervous system activation and is self-limited. Chronic pain, in contrast, may be considered a disease state. It is pain that outlasts the normal time of healing, if associated with a disease or injury. Chronic pain may arise from psychological states, serves no biologic purpose and has no recognizable endpoint.

The National Center for Health Statistics reports that 76.2 million people suffer from chronic pain in the U.S. alone. It affects more Americans than diabetes, heart disease and cancer combined. Chronic pain severely impacts your quality of life. It can disrupt sleep, lower concentration, reduce energy levels, contribute to anxiety and depression and cut down on your ability to enjoy life.

When pain has such a significant impact on your quality of life, it's understandable that you might go to great lengths to manage it. But the overuse, misuse or abuse of painkillers can lead to a whole host of other issues. This is a problem of epidemic proportions in the United States, where we consume approximately 80% of the world's opioids.

But what choice do you have? The FDA and Big Pharma would like you to believe there aren't any alternatives to prescription painkillers. After all,

pharmaceuticals are a multibillion-dollar industry, forecast to reach $400 billion in market value by 2020.

THE DARK HORSE OF PAIN RELIEF

DMSO, or dimethyl sulfoxide, was discovered in the mid-1800s as a by-product of the paper-making process.Fast-forward to the early 1960s when Dr. Stanley Jacob, at that time the head of the organ transplant program at Oregon Health Sciences University in Portland, discovered that this colorless liquid could penetrate living tissue without damaging it.

After that, Dr. Jacob devoted the rest of his career to championing DMSO's potential to alleviate a great number of medical conditions, including arthritis, fibromyalgia and scleroderma, among others.

Through his research, Dr. Jacob found that this liquid solvent has notable anti-inflammatory, antiviral, analgesic and antioxidant properties. In *DMSO: Nature's Healer,* by award-winning health science writer Dr. Morton Walker, Dr. Walker asserts that DMSO is such an effective and versatile compound it "has the largest potential number of uses ever documented for a single chemical."

Regarding the healing potential of DMSO, Dr. Jacob echoes the notion of its versatility, "We're not dealing with just another chemical, we're dealing with what I always call a therapeutic principle. A given drug or medicine will treat a given disease or more, but a therapeutic principle is an entirely new concept in therapy."

Unfortunately, the use of DMSO in the medical community is historically fraught with controversy. This compound is so cheap and so effective, it renders other, more expensive therapies moot. The few patents on DMSO Dr. Jacob was able to secure expired in 1987. Without patent protection, pharmaceutical companies can't profit from this product, which leaves little incentive to develop and market it for the good of the masses.

And what good it could do! Here are just a few examples of what this prodigious potion is capable:

- Opens blocked sinuses within minutes
- Dissolves existing scar tissue, and prevents it from forming
- Treats painful corns, calluses, ingrown toenails, bunions, hammertoes and heel spurs — it has also been shown to control gout pain
- Clears up gum disease and reduces tooth decay
- Decreases the incidence of heart attacks or angina pain
- Heals burns and relieves sprains, strains and arthritic joints

- Penetrates the blood-brain barrier to effectively deliver drugs
- Reduces the symptoms of herpes zoster (shingles)
- Turns cancerous cells back to normal.

And the list goes on…

But how does it work? And how can you procure this amazing remedy for yourself? Read on to find out.

HOW IT WORKS

To be clear, DMSO is not a cure for pain. Rather, it alleviates pain by inhibiting the transmission of pain messages. It's also interesting to note that because it permeates the skin and enters the bloodstream, DMSO has systemic effects. So application on one area of the body might lead to a reduction in pain elsewhere.

Not only can DMSO itself penetrate and relieve pain, studies have shown it is capable of effectively transporting other types of medication. Researchers have found that DMSO can act as a delivery system for a wide variety of drugs including antibiotics, insulin, corticoids and cytostatics, among others — with minimal risk of infection occurring wherever the skin is penetrated.

"DMSO's ability to pass through living tissue is related to its relatively polar nature, its capacity to accept hydrogen bonds and its relatively small and compact structure," writes Dr. Harry Szmant, a chemistry professor at the University of Detroit. It can pass through cellular membranes, the endothelial coatings of arterial walls, the layers of protective tissue surrounding the brain (called meninges), healthy skin, mucous membranes and other tissues.

Additionally — this solvent's pharmacological properties are seemingly endless! — DMSO inhibits bacteria growth, increases circulation by dilating small blood vessels, acts as solvent for collagen, promotes urine excretion and effectively carries local anesthetics into deeper layers of skin.

But for all its uses, DMSO is extremely easy to administer. It typically comes in a liquid or a gel form and is applied to the surface of the skin. In a segment on *60 Minutes*, Dr. Jacob showed patient Sandy Sherrick just how to do it:

Now, when you put it on, don't rub it too hard. You just have to apply it to the skin and it goes in. Let it dry over 20 minutes to a half hour. It won't be totally dry, but anything left you can just wipe off.

Within 15 minutes of application, you might notice a distinct garlic

taste — a common, albeit quirky side effect — which demonstrates that DMSO is capable of permeating your skin almost instantly, with relief lasting up to six hours.

BUT IS IT SAFE?

As with any drug or treatment, safety is just as important as efficacy. By the early 1990s, more than 3,000 scientific studies involving approximately 500,000 clinical patients had been carried out all over the world. Dr. Walker points out that "Scientists have studied DMSO with eight species of mammals, including humans, as well as some fish and birds, with almost universal agreement to its low toxicity. Short- and long-term administrations of the drug to many animals have shown they tolerate it well."

And despite the FDA's reticence to approve the medical use of DMSO, even J. Richard Crout, MD and former director of the FDA's Bureau of Drugs, said (in an interview on *Good Morning America*, no less), "It's really quite safe when put on the skin."

As with any topical use of a medication, the skin must be clean, dry and unbroken before application. Dr. Walker recommends keeping topical applications of DMSO below 70%. He suggests "a 70% concentration… mixed with water in volumes ranging from 8–12 mL, applied on and around the injury in a wide area at least three times daily."

With higher concentrations of DMSO, some people experience localized warmth, redness and itching. But there's an easy remedy for that. Walker writes:

> [Aloe vera] is useful as a follow-up to any topical DMSO application — its use is recommended after each DMSO treatment, with or without skin irritation occurring. Aloe vera is a good preventative for such external irritation.

By now you're probably wondering just how you can get your hands on this powerful salve. I assure you, it's probably easier than you think.

RELIEF IS JUST A CLICK AWAY

As mentioned above, you can purchase DMSO as a liquid or a gel. The easiest place to find it? The internet! After a two-minute search, I was able to find 100 mL of 70%-concentration, pharmaceutical-grade, fragrance-free, liquid DMSO for less than the price of 3-D movie ticket.

As with any new medication, be sure to discuss adding DMSO to your treatment plan with your doctor. And of course, if you experience any

serious irritation, discontinue using it immediately.

Break the cycle of chronic pain with this simple, effective yet inexpensive remedy. You have every right to live a pain-free life without the risks of long-term opiate drug use. Just imagine what a sweet, sweet relief that would be.

The Natural Pain Relief Miracle

Tackle Pain and Inflammation With This Extract From a Delicious Fruit

What's the single biggest health problem in America?

Note that I'm not asking about the most widespread *disease*.

Instead, I'm inquiring about the specific *health problem* that the largest number of Americans would most dearly love to solve.

Put this way, the answer just might be chronic pain. An estimated 100 million Americans — roughly one in three — suffer from it.

This terrible fact can be obscured by typical medical statistics because the causes of daily, soul-crushing pain vary so widely.

Sometimes it's due to diseases such as arthritis, fibromyalgia, or diabetic neuropathy.

Other times, it's a "souvenir" from an old injury — by the time you reach age 50, you've inevitably collected several of these.

And still other times, there's no identifiable cause at all — but the pain is no less real.

Whatever the cause, as with virtually every other health malady in modern America, mainstream medicine recommends attacking it with double handfuls of pharmaceuticals. Most are nonsteroidal anti-inflammatory drugs, or NSAIDs. These tamp down inflammation and reduce pain but historically have exhibited a few pesky side effects, such as death from heart attacks and strokes.

Vioxx, for example, caused as many *140,000* cases of serious heart disease before it was pulled from the market in 2004.

Oops! Sorry!

Clearly, the fact that a molecule is minted via synthetic chemistry — often from a petrochemical base — doesn't make it better. It simply makes the molecule patentable, which in turn makes it profitable. I've long argued that synthetic molecules like those in NSAIDs are guilty until proven innocent, simply because the human body has no evolutionary history

with them.

So let's turn to the world of natural molecules, the ones constructed in green plants rather than industrial ones, and which your body recognizes via long co-evolutionary association.

The most promising for pain relief are the ones in plant enzymes, most notably bromelain.

Extracted from pineapple stalks, bromelain features proteolytic compounds — which simply means it can break down proteins.

That's why bromelain is a potent digestive aid, especially after protein-heavy meals. These enzymes aid your natural digestive juices in taking apart large protein molecules so the body can better use them.

These same enzymes can also take apart troublesome compounds that drive inflammation and pain. This means they offer profound anti-inflammatory and pain-relieving effects, without the horrific side effects noted above.

Specifically, a recent, rigorous German study divided 90 patients with arthritic hip pain into two groups. One got a supplement with bromelain and other enzymes for six weeks. The other got a popular synthetic anti-inflammatory.

Result? The bromelain supplement turned out to be just as effective, with far fewer side effects.

Other studies have found positive results for this enzyme in handling pain and inflammation following eye, nose, tooth, and foot surgery. It has even been shown to help bruised, battered boxers heal faster!

Bottom line: Natural enzyme preparations featuring bromelain show great promise for alleviating chronic pain, the worst health problem in America. Seek out quality formulations and take them according to package directions.

Power Up Your Meal With These Potent Additives

Three Herbs and Spices to Help Your Body Crush Inflammation

Many chronic diseases result from inflammation on the cellular level or in one or more (or all) body systems.

That's why it's crucial to keep inflammation in check. Doing this will allow you to achieve optimal functioning, enhanced immunity, vibrant

energy, and mental clarity.

One important way is to eat a diet high in foods with anti-inflammatory properties. Chief among them, vegetables — especially dark-colored greens and cruciferous veggies like broccoli and cabbage — Omega-3-rich fish, egg yolks, and grass-fed meats.

But spices and herbs deserve a special consideration too. On an ounce-per-ounce basis, they are extremely potent compared with other foods. So not only will adding a few carefully preserved herbs to your food improve the taste, but it can also amplify the antioxidant power of your meal.

HOW HERBS AND SPICES REDUCE INFLAMMATION IN YOUR BODY

Chinese and Indian medical practitioners have used herbs and spices to treat all manner of ailments, thanks in large part to their anti-inflammatory and antioxidant properties.

Inflammation and oxidation are closely related: Antioxidants quell free radicals that damage cells and lead to inflammation. Nutrients can also prevent inflammation through other pathways, notably by turning off genes that trigger inflammatory proteins or processes, by boosting the concentration of proteins that counter inflammation, or by modulating the gut biome.

This power is highly concentrated in herbs and spices. For example, just half a teaspoon of ground cinnamon has as many antioxidants as half a cup of blueberries, while half a teaspoon of dried oregano has the antioxidant power of three cups of raw spinach.

So what are some of the best herbs and spices that you should be incorporating into your diet?

INFLAMMATION CRUSHER #1: TURMERIC

If ever a spice were life-enhancing, turmeric is it.

Rigorous scientific studies in recent decades confirm that turmeric has "antioxidant, anti-inflammatory, antiviral, antibacterial, antifungal, and anticancer activities, and thus has a potential against various malignant diseases, diabetes, allergies, arthritis, Alzheimer's disease, and other chronic illnesses."

Turmeric's benefits are largely pinned to curcumin, a potent antioxidant that dramatically reduces inflammation (while also giving the spice its

vibrant yellow color). Curcumin inhibits the growth of tumor cells in a variety of cancers and improves insulin resistance in subjects with altered metabolic function.

But the story doesn't end with curcumin. Turmeric contains two dozen other anti-inflammatory compounds, including six different COX-2 inhibitors (the COX-2 enzyme speeds up the formation of substances that cause inflammation and pain, and causes tumor cells to grow).

Include turmeric in your diet by adding it to salad dressings and meat or fish marinades, or by making a turmeric-infused tea or latte. Turmeric's bioavailability is low, though, so take it with black pepper or black pepper extract to dramatically increase its benefits.

INFLAMMATION CRUSHER #2: CAYENNE PEPPER

Capsaicin is the compound responsible for both the medicinal properties of cayenne pepper and its spicy taste. The hotter the pepper, the more capsaicin it contains. It's used widely in ointments and creams as a pain-relief aid because it depletes nerve cells of substance P, a chemical that transmits pain signals to the brain.

Cayenne contains a range of flavonoids and carotenoids — antioxidants that scavenge free radicals to protect against the cellular damage that leads to inflammation and disease.

Cayenne may also promote weight loss by raising core body and skin temperature, thus inducing greater energy expenditure. There's even a study showing that if you mix it with XCT Oil or Brain Octane Oil as a carrier, it can increase thermogenesis over either one used alone!

A warning, though: Cayenne is a member of the nightshade family, and you may be sensitive to it.

INFLAMMATION CRUSHER #3: GINGER

Ginger is another spice that's been used for centuries for inflammation and pain, to soothe sore muscles and throats and combat general aches and fatigue. Ginger attacks inflammation through the action of gingerols, shogaols, and paradols.

As a group, these ginger compounds act like nonsteroidal anti-inflammatory drugs (NSAIDS), such as ibuprofen, Aleve, and Celebrex, which are widely used in this country to relieve arthritis pain. But why turn to drugs when science has shown that ginger blocks the pain-causing chemicals associated with arthritis?

Ginger goes well in Asian dishes (and really anything, if you like the

kick). It's great added to tea for a sore throat or cold, and it's effective in fresh and powdered form. You can even apply it directly to a painful joint for relief.

Low-quality or poorly stored ginger powder is at high risk for mycotoxin, and fresh ginger molds easily in the fridge. So get the fresh stuff, or store your dry ginger away from heat, moisture, and light.

Hint for cooking: If you cook ginger in fat, it tends to get bitter. Adding it toward the end of cooking with oil preserves flavors better!

Hint for sushi: All sushi ginger has sugar in it, but if your sushi ginger is pink, it also contains artificial dye. Eat only the yellow version, and not a lot, unless you want the sugar.

Hint for joint wraps: Peel and mince 1–2 Tbsps. of ginger and mix with enough XCT Oil to form a paste. Warm the paste and apply to joint for 10–15 minutes with or without a wrap.

HOW TO AVOID MOLD TOXINS IN SPICES & HERBS

One thing you must watch out for are mold toxins in your spices and herbs.

The herb and spice industry is painfully aware of spoilage issues, which is why it's become so common to irradiate spices, but herbs and spices can still easily go bad in your home.

For example, when you get that canister of paprika down from the back shelf, pry it open, and dump some into a steaming pot of food, you're also likely dumping a substantial amount of toxins in too. How? Because the last time you did this, the steam entered the paprika package and started the mold growing. You'll always find a few mold spores in natural products, and the environment in your spice cabinet above the stove is a perfect incubator.

One of the simplest things you can do to increase your performance, then, is to always use high-quality, recently opened, fresh or dried herbs and spices. If they're more than a few months old, toss them out.

But the bottom line is, if you're eating an anti-inflammatory diet and not including ample amounts of spices and herbs, you're missing out!

How to Reduce Your Inflammatory Load

We'll start by getting one thing straight. Inflammation is not always bad. In fact, you'd be dead without it. Inflammation in the body is a normal, healthy response to injury or to attack by infectious agents like germs and viruses.

You can see it as redness and swelling. You can feel it as pain and heat. And it's absolutely vital. Inflammation is the body's way of getting more nourishment and more immune activity into an area that needs to repair a wound or fend off an infection.

But inflammation is not always helpful. When it escapes its normal bounds, it has great potential to cause illness. The most visible — and increasingly common — example of that is development of autoimmune diseases such as Type 1 diabetes, lupus and rheumatoid arthritis. Unsurprisingly, the incidence of all three is on the upswing.

However, even when whole-body, inappropriate inflammation doesn't rise to the level of diagnosable disease, it is still doing damage — damage that slowly accumulates.

A great deal of evidence suggests that over time, virtually every one of the conditions that are variously called "diseases of aging" and "diseases of civilization" is probably due to chronically elevated levels of whole-body inflammation.

Ultimately, the damage this inflammation causes manifests as the familiar modern scourges: many forms of cancer as well as heart disease, Alzheimer's and Parkinson's.

Recent evidence indicates that whole-body inflammation may also contribute to psychological disorders, especially depression, which is reaching epidemic levels.

WHAT ROLE DO GMO FOODS PLAY IN THIS INFLAMMATION EPIDEMIC?

To answer that, we need to look back at how the American diet has changed over the last 150 years.

The optimal diet to keep inflammation in check is similar to the one most Americans ate in the early 20th century — high in healthy, traditional saturated fats (roughly defined as fats that remain solid at room temperature) like butter, tallow and lard, and low in polyunsaturated oils like those extracted by solvents from corn and soybeans:

The diet back then was also relatively low in carbohydrates, especially sugar (note how sugar consumption and obesity have risen in tandem).

As a result of our ancestors' healthy mix of nutrients, in the late 19th and early 20th centuries, obesity was rare, and cardiovascular disease was virtually unknown — a physician practicing at the turn of the last century might not encounter a single case in the course of his career. Ditto for

many diseases of civilization.

(Average life expectancy was shorter in those days largely because infectious disease was rampant — people lucky enough to avoid scourges such as tuberculosis, pneumonia, Spanish flu, typhoid, polio, and the like generally lived longer, healthier lives than people today. Since modern sanitation has effectively eliminated those diseases, we can now have the best of both worlds — if we have the sense to eat like our great-grandparents did!)

Unfortunately, the inflammation epidemic began in the 1950s as newly prosperous postwar Americans ate more and more sugar and a newfangled cooking oil called Crisco, made of inflammatory trans fats.

Then, in the 1980s, it began accelerating. Rapidly.

That's when Big Government and Big Food teamed up to persuade us to avoid beef, eggs, butter, and cheese and eat more low-fat, high-carbohydrate foods. And whenever we did eat fat, the feds warned, it needed to be "heart-healthy" kinds like soy and canola.

Then, in 1995, the first GMOs were approved and planted in Midwestern fields. The practice ramped up in the early 2000s and roars ahead to this day. As of 2013, 85% of the corn and 91% of the soybeans grown in the U.S. are genetically modified, and GM crops are planted on 169 million acres — about half of all American farmland used for crops.

(Incidentally, the crops were not genetically modified to make them more nutritious, or even better tasting. The most common aim was to make them better able to withstand drenching the fields with herbicides — boosting crop yields slightly, but also polluting groundwater and spawning unkillable "superweeds." But the environmental horror wrought by GMOs is another story.)

The human health outcome of the GMO boom? Disease rates that had begun to climb faster in the 1980s ramped up even more in the 2000s.

In other words, the changing American diet had already ratcheted up inflammation — and the diseases it causes — for decades. *Then GMOs apparently made an already pro-inflammatory diet more inflammatory, and American health went from bad to worse.*

That's because GMOs may have their own, extra inflammatory component.

Genetic engineering — that is, using advanced technology to forcibly transfer genes between two species that cannot breed naturally — creates novel biochemistry in plants, biochemistry that the human body has never

encountered before.

Changing one gene in the recipient organism does not change just one protein in the organism's makeup — it changes dozens, perhaps hundreds, of molecular components.

The probable result: When we eat GMOs, the body registers the novel mix of components in the food as foreign, perhaps dangerous. The body's immune system, when invaded by foreign substances, ramps up its inflammatory response to neutralize and expel the threat. Chronic inflammation eventually results in chronic disease.

It's a theory, but a compelling one, and one bolstered by a large number of European studies that show widespread health problems in animals — especially liver and kidney dysfunction — fed GMOs.

If it's true, the result of the GMO food "revolution" has been even more disease for Americans. It's definitely true that we are now firmly fixed as the least healthy people in the developed world. Conversely, the nations of the European Union, which have had broad-ranging GMO restrictions in place since 1997, have pulled significantly ahead of us in health outcomes.

So…now you have a better understanding of the problem.

Let's Move on to Solutions!

Here are 10 top tactics for reducing the body's "inflammatory load" and thus promoting health and longevity:

1. Fix your fats. Eat more healthy saturated fats such as butter, non hydrogenated lard and virgin coconut oil, and fewer inflammatory polyunsaturated oils such as corn oil and soybean oil.

Especially avoid polyunsaturated oils that have been heated and oxidized, like the sort you'll find in an infrequently changed deep-fat fryer — these altered oils are highly inflammatory.

Don't worry about saturated fat (roughly defined as fats that remain solid at room temperature) "clogging" your arteries. The human circulatory system isn't like your household plumbing. Blood-borne fats adhere to artery walls only in response to elevated inflammation — without it, fats just won't stick.

I realize this is difficult to believe. An absolutely relentless campaign has been waged by Big Food (and via its lobbyists, Big Government)

for 60 years, hammering the premise that saturated fats will lead to cardiovascular disease. But it is categorically untrue, proved by a brave cadre of researchers who've discovered that a diet consisting of roughly 60% fat, much of it saturated, is associated with the best health outcomes.

So the advantage of this fats swap is twofold — corn and soy oils are inflammatory on their own, and modern versions on store shelves are also almost certainly genetically modified. Substituting the healthy saturated fats, most of which are animal-based and non-GMO, avoids both sources of inflammation, and will put you on the way to abundant health.

2. Don't heat olive oil. What about olive oil, the darling of the academic nutrition crowd? As a largely monounsaturated fat, it's more stable than the polyunsaturates, and perfectly healthy to eat if it is unheated. So use it liberally as a salad dressing. But if you are going to heat an oil for frying or baking, stick with the saturated ones listed above — they won't oxidize and kick off your inflammatory response.

3. Eat fewer carbohydrates, and especially less sugar! This is a tough one for many people. Sugar is highly addictive — brain scans suggest it is as difficult for some people to kick as heroin. However, as with heroin addiction, the early phases of withdrawal from sugar are the hardest. Within a week, the cravings begin to subside, and within a month, foods that once seemed satisfyingly sweet can seem cloying, even nauseating.

By "sugar," we're referring to added sweeteners of all kinds — high fructose corn syrup, honey, molasses, real or artificial maple syrup, etc. All can spike blood sugar and inflammation.

The best way to satisfy any sweet cravings that remain after the "detox" period is with a piece of fruit, especially a relatively low-sugar fruit such as blueberries or raspberries. The sugar in these fruits is bound in a matrix of pectin and fiber that slows absorption and tamps down inflammation.

4. Go for the omega-3s. While saturated fats are generally best, getting enough of a particular kind of polyunsaturated fat known

as omega-3 is also vital. This fat is termed "essential" because the body cannot manufacture it on its own. Another polyunsaturated fat, known as omega-6 ("omega" refers to a specific section of the fatty acid chain, and the numbers refer to the first atomic double-bond location in that part) is also essential.

The problem — most Americans consume far too much omega-6, as it's abundant is soybean oil, the cheap oil that's used in fried food and low-quality baked goods. When the 3-to-6 ratio gets out of whack, inflammation skyrockets. The ratio in the modern American diet can be as high as 1-to-20. Ideally, it should be 1-to-2, or even 1-to-1.

The solution: Eat more fatty, cold-water fish such as wild-caught Alaskan salmon. If you don't like salmon, take at least 3 grams daily of a high-quality fish oil supplement — one that's listed on its label as being molecularly distilled.

If you use fish oil capsules, take a product that provides 700–1,000 milligrams of EPA (eicosapentaenoic acid) and 200 to 500 milligrams of DHA (docosahexaenoic acid) daily. These chemical constituents of fish oil, in this ratio, appear to deliver the greatest anti-inflammatory effect.

As you ramp up your intake of omega-3 fats, dial down your intake of omega-6 fats. That means eating fewer — preferably none — of the following: factory-farmed beef, nonorganic dairy, cheap baked goods, most flour-based products, and grains in general. Be especially careful to avoid deep-fat fried fast foods, which are essentially drenched in oxidized omega-6 soybean oil.

5. Drink more water. Inflammation, like all metabolic functions, depends on having sufficient water to function within optimal bounds. If you don't have your own spring, drink fresh water from a reverse osmosis filtration system.

6. Try turmeric. When researchers studied elderly villagers in India, they began to notice something extraordinary — they could scarcely find a single one with Alzheimer's disease. Indeed, senior citizens in India turned out to have one of the lowest Alzheimer's rates in the world.

Similarly, elderly villagers in Okinawa seem remarkably free of Alz-

heimer's and most of the other diseases of civilization as well. Indeed, Okinawans have the longest life spans in the world, and typically reach their advanced ages in relatively good health.

While the elderly Indians and Okinawans have several characteristics in common — daily gentle exercise; extended families that keep them socially engaged; relatively simple diets based on natural, unprocessed foods — one particular food common to both stood out to researchers: turmeric.

In India, the villagers received the spice in their daily curry-intensive meals. In Okinawa, they got it via turmeric tea — a refreshing brew that's something of a national drink, brewed at home and available bottled in local stores.

To add this brilliant-orange spice to your own diet, you can emulate the Indians and eat more curry — turmeric is one of five spices in that traditional seasoning. Or you can make turmeric tea.

7. Take a supplement that contains abundant plant enzymes. Probably the best of these is bromelain, an extract from pineapple plant stalks that helps the body efficiently clear away damaged cells — including cells damaged by inappropriate inflammation. Take bromelain between meals to increase its cell-clearing potential. Aim for 250–500 milligrams, three times daily.

8. Take, and eat, probiotics. A problem called small intestinal bacterial overgrowth, or SIBO, happens when the gut flora gets out of balance. Gut inflammation — and whole-body chronic inflammation — can be the result. Regularly (at least three times per week, daily is better) eat fermented foods that contain live bacterial cultures such as whole-milk yogurt, sauerkraut and kim-chi, and take probiotic supplements containing Bacillus coagulans (BC-30) or Lactobacillus GG.

9. Add at least some of these foods to your diet. Each has been shown to have beneficial properties, some of which may be due to anti inflammatory activity: raw cacao, hemp seed, goji berry, aloe vera, bee pollen/ honey/royal jelly/propolis, kelp, spirulina (brackish), blue green algae (lake), marine phytoplankton, maca, coconut, acai, chlorella, camu-camu, Incan berries, dulse, resveratrol,

oat grass, barley grass, wheat grass, turmeric, ginger, curcumin (from turmeric), rosemary, basil, cherries, rutin, and boswellia (an Ayurvedic herb).

10. Get hungry now and then. Probably the best way to have a short, unhealthy life is to eat constantly, something contemporary Americans do extremely well.

Never giving your digestive system a chance to rest appears to aggravate the inflammatory response. Conversely, fasting — even for relatively short periods — appears to help calm it.

Researchers confirmed this when they studied the intermittent fasting that Muslims do during their month-long observance of Ramadan. Abstaining from food during daylight hours required them to go without for roughly 12–16 hours daily. Interestingly, fasting Muslims ate just as much as members of the nonfasting control group — they simply did it in a compressed period of time, generally eating a very late dinner and a pre-dawn breakfast.

The result: The blood markers for inflammation decreased significantly in the fasting group.

There's no need to fast daily, or even weekly. In intermittent fasting, all that matters is occasionally allowing yourself to become hungry. You could fast one day a week or twice a month, or even skip a single meal now and then.

Do all of the above and you'll take a giant step away from disease and toward a healthy, vibrant life. If it seems daunting, ease into it. The simplest change of all is the first one. Dump those liquid oils down the drain and begin cooking with butter, non hydrogenated lard, or virgin coconut oil. Then, step by step, incorporate the rest into your life. Before you know it, you and your family will look better, feel great, and enjoy the confidence that comes with knowing you're on the path to health and longevity.

MAKE YOUR HEART "YOUNG" AGAIN WITH THESE EASY TIPS

The second biggest killer of Americans is heart disease. This includes heart attacks and strokes. Each year, about 1.5 million Americans suffer heart attacks and strokes.

Put another way, daily, 2,200 people die from cardiovascular diseases. Every 44 seconds someone in the U.S. has a heart attack. And every 4 minutes, someone dies of a stroke.

Many people don't realize this but heart disease and strokes, if survived, still can destroy your life because they can result in serious illness or disabilities.

Heart disease is an enormous problem that will affect almost every family. But if the FDA really has our interests at heart, then why are there so many people struggling with heart disease in our civilized, 1st world nation that flaunts its amazing technology?

If you've paid attention to the FDA's food pyramid, you'll notice it's always suggested a low fat diet with a huge emphasis on grains and carbohydrates. Meat also took a backseat in regards to what foods should be emphasized.

So for decades now, most people have had it hammered into their heads that a high fiber, low fat diet is the healthiest diet there is. The epidemic increase in heart disease proves otherwise. You see, what the FDA's food pyramid suggests as science is actually not sound science.

It all goes back to the research conducted by Ancel Keys and his seven

countries study which tracked the fat consumption and heart disease levels of various nations. It was named for seven specific countries that saw an increase in heart disease cases that seemed to correspond with increased fat consumption.

But in reality, it should have been named the 22 countries study. He deliberately omitted lots of data that was counter to his conclusion that a low fat, low protein diet is necessary to reduce heart disease.

The FDA used this faulty study to shape the diet plan of Americans and of course, food companies went along with it producing low fat and high fiber products. Year after year, this concept of heart healthy has been layered into the thinking of Americans.

And yet, heart disease is neck and neck with cancer as the leading killer in America. Go figure.

It's certainly true that some fats are healthier than others. Trans-fats are poison for your arteries. Fortunately many efforts are in place to strip it out of our foods.

Back to our story: Some people believe there was a deliberate reasoning behind this faulty diet plan.

To create plenty of new cases of heart disease to be treated by big corporations. Others feel that the big push towards a low protein diet is for the purpose of creating a more apathetic populace. Often you'll find in a cult that they serve low fat, low protein meals to make it easier to control their cult members.

On that same note, your brain is made of fat, and requires fat to properly function. If you're not getting enough healthy fats, then your brain performance suffers. Just something to think about.

Uncensored Cure: Defeat Heart Disease with "Activator X"

Lower Your Risk of Disease and Boost Overall Well-Being With This Incredible Nutrient

To understand perhaps the most important nutrient you can consume — one that dramatically lowers risks of heart disease, osteoporosis, and many other grave conditions — let's visit a great year, and a great man.

The great year was 1945. The allies had just triumphed in WWII.

The great man was not, however, a war hero — at age 75, combat duty wasn't an option. He was a mild-mannered Cleveland dentist named Weston A. Price.

And he was about to reveal an amazing substance to the world.

THE DISCOVERY OF "ACTIVATOR X"

Throughout the 1930s, Price had crisscrossed the planet to study and write about the physical — including the dental — health of traditional societies.

His theory: The "industrialized" Western diet of the early 20th century — especially its flour, sugar, and vegetable oils — was destroying Americans' health. He could see it daily in the copious cavities and general lousy health of his dental patients.

But examining the teeth, bones, muscles, and heart health of Native Americans, Polynesians, Australian aborigines, and Inuit, he consistently found them impressive.

In his native subjects, he discovered little or no cancer, heart disease, diabetes, hemorrhoids, multiple sclerosis, Parkinson's or Alzheimer's diseases, osteoporosis, or other ills of civilized life.

They tended to have robust mental health too, characterized by cheerful, gracious dispositions.

After publishing his seminal *Nutrition and Physical Degeneration* in 1939, in 1945, he proposed that a "vitamin-like" substance that he termed "Activator X" was a major contributor to the enviable health of these native peoples.

It seemed to be abundant in the organs, milk, and fat of animals that ate fast-growing green grass in the spring and fall.

It was also rich in seafood including fish eggs, and in fermented vegetables such as sauerkraut and Japanese nattō

Indigenous eaters who regularly consumed these foods displayed two particularly outstanding traits:

- A notable lack of cardiovascular disease
- Strong, well-developed bones, teeth, and overall facial structure.

Price died in 1948. Subsequent research has revealed that his "vitamin-like activator" was indeed a true vitamin, now known as vitamin K2.

A SPECIAL K PRIMER

Fast-forward 67 years. Though Price accurately believed that his "Activator X" was the most vital nutrient in a healthy diet, today relatively few people have heard of vitamin K.

That's probably because most of the good research about its value is

quite recent. *The USDA didn't even officially calculate the vitamin K levels in foods until 2006.*

Even fewer know that it has two forms — K1 and K2. These both prepare calcium to do tasks in the body. Aside from that, they are quite different:

- Vitamin K1, also known as phylloquinone, is abundant in green leafy vegetables such as spinach, cabbage, Brussels sprouts, and kale. The liver uses it to activate special proteins that bind to calcium and help to clot the blood
- Vitamin K2, or menaquinone, is found in fermented and animal-based foods. (Also, the human body converts K1 to K2 in the intestines, but very inefficiently — most must come directly from food.) Vitamin K2 tells calcium to go into bones and away from tissues.

Vitamin K1 deficiency appears to be rare, so I'm going to focus exclusively on K2 for the rest of this article.

K2 is the most vital — and, for a generation of Americans who have been warned to avoid animal foods — the one in which we are most likely to be deficient.

At least one researcher — Dr. Kate Rhéaume-Bleue, author of *Vitamin K2 and the Calcium Paradox: How a Little-Known Vitamin Could Save Your Life* — has estimated that 80 percent of Americans are deficient in K2.

While that's just an estimate (as neither Daily Value nor optimal blood levels have been established for K2), that percentage sounds quite plausible based on my own research.

K2 AGAINST HEART DISEASE

One of the major drivers of cardiovascular disease is a buildup of calcium in the arteries around the heart.

Arteries "hardened" by rogue calcium are no longer supple — they are likely to clog, break, or both, causing heart attacks and strokes.

As it turns out, research shows vitamin K2 has a near-miraculous ability to keep calcium from encrusting the arteries.

In one large European study, people with the highest intake of vitamin K2 were 52 percent less likely to have calcified arteries. They also had a 57 percent lower risk of dying from heart disease over a seven-to-10-year period.

By contrast, the popular statin drugs do not reduce the risk of death for people with no history of heart disease, they are expensive, and have multiple side effects.

WHERE'D YOUR FOOD COME FROM? A WORD OF WARNING ON K2

Now that K2 is becoming somewhat better known, misinformation about how to consume more of it abounds. For example, the USDA has listed these foods as rich in K2:

- Nattō
- Cheese
- Eggs, especially the yolk
- Butter
- Liver
- Chicken breast
- Ground beef.

However, actual K2 concentration in these foods depends a great deal *on their origin.*

Weston Price himself analyzed some 20,000 butter samples from all over the world. He discovered that the concentration of "Activator X" varied *50-fold* among them.

Animals that ate lush grass, rich in K1, produced copious amounts of K2 that showed up in their milk and fat.

Conversely, feedlot cattle, fed grain and storage hay, appear to produce milk and meat with little to no K2

BETTER BONES… AND MORE!

Here is the "genius," if you will, of K2. While preventing calcium from collecting in arteries, keeping them supple and resilient, it simultaneously sends it to bones and teeth, making them stiff and strong.

It does this by stimulating the calcium-binding activity of two proteins that help to build bones.

Seven trials of Japanese women found that vitamin K2 reduced spinal fractures by 60 percent, hip fractures by 77 percent, and all nonspinal fractures by 81 percent.

And there appear to be plenty of other benefits from a higher-than-average K2 intake.

A study recently published by the European Prospective Investigation

into Cancer and Nutrition (EPIC) showed increased K2 intake may reduce the risk of prostate cancer by 35 percent.

Perhaps the most exciting result is that people who eat more vitamin K2 tend to have lower all-cause mortality — which simply means it lowers the risk of dying from *anything*.

In short, K2 is a stunningly valuable nutrient. It boosts the health and disease resistance of virtually every system in the body, including the bones, heart, skin, brain, and prostate.

THE TWO BEST "FLAVORS" OF SPECIAL K

Vitamin K2 comes in several forms. Those known as MK-4 and MK-7 are the two most significant from a health perspective.

They behave quite differently in the body.

The MK-4 form has a mere one-hour half-life. (Half-life means the time it takes half the measurable quantity of a substance to be metabolized.)

The MK-7 form's half-life, however, is three days. This means consuming it regularly gives you a good chance at building up a therapeutically valuable concentration in your blood.

Putting it all together, I recommend aiming for a minimum daily dose of about 180 micrograms of vitamin K2 in the MK-7 form. That's an amount associated with better health in a variety of studies.

HOW TO GET IT

Ideally, you should obtain K2 from healthy animals that feast on grass.

But if you lack access to grass-fed meat and foods produced by pasture-raised animals, what do you do if you want to keep your K2 levels optimal?

My favorite way is to buy the fermented soybean dish known as nattō from my local Asian grocer.

For just $1.99, I get four 46-gram (a little under two ounces) packets of frozen nattō each in a polystyrene container. One of these yields about 600 micrograms of MK-7 vitamin K2.

That's roughly three times the dose that research has found improves cardiovascular and bone health. Overdosing with K2 is unlikely — a study with rats showed that MK-7 doses more than 1,000 times higher than this resulted in no ill effects.7

So I eat one of these packets each morning. It does not take long. Each portion is about five small bites.

BUT NATTŌ TASTES AWFUL!

However, you may never be able to accept to odd texture and flavor of nattō, which has been likened by Americans to "sweat socks," "puke," and, my favorite, "death itself."

My wife, a typically adventurous eater, says it's the one food that invariably triggers her gag reflex.

Oddly enough, however, I am not kidding when I say *I love the stuff*. I've gone from indifference to an absolute craving for my morning treat, which I think suggests, at a basic level, my body simply *needed* it.
In my four-month experience with daily nattō, my health, generally good, has never been better.

In particular, my endurance has surged. As I write this, I sit in a coffee shop 20 miles from my home. I biked here in 105-degree Phoenix heat and was moving considerably faster in the last five miles than in the first five.

Aside from nattō, if you can find butter and cheese from grass-fed cattle, it likely has K2 in it — though, again, there is generally no way to know how much.

So for most Americans, the best way to get it is via a vitamin D3/K2 supplement.

Vitamin D3 and K2 make a potent, synergistic pair.

That's because D3 helps the body absorb (as opposed to excrete) calcium, while K2, as noted, tells it where to go.

You must make sure that the D3/K2 supplement provides K2 in MK-7 form, which gives it a long effective life in the body. It should also be GMO-free.

However you get your K2, get ready to feel a subtle but unmistakable lift in your overall well-being. It is indeed, as Price so wisely observed, an "Activator" with a profound ability to upgrade your overall health.

The Heart-Health Threat as Dangerous as Smoking

A 50-Year-Old Discovery Is Now Receiving the Attention It Deserves

In 1969, a young, hotshot medical researcher named Dr. Kilmer McCully made the discovery of a lifetime.

He found that a certain amino acid in the bloodstream rips apart artery walls like a rabid wolf tearing open a freshly killed deer carcass.

His discovery was well received by the medical community. At least initially. But as he continued his investigations, many of his colleagues at Harvard Medical School began to turn on him.

Even decades ago, medical schools were at the mercy of massive pharmaceutical companies and government organizations that doled out funding.

The big money wanted to villainize cholesterol. Why? Because expensive, patentable drugs could lower it. Anyone who went against this doctrine was considered an enemy.

"They moved my lab into the basement, where I had no contact with other people," said McCully many years later.

"They made the situation so unpleasant I decided I couldn't work there."

Shortly after leaving, a Canadian television show interviewed him. He got a call from the public-affairs director of his former hospital, Massachusetts General. "He told me to shut up," McCully recalls. "He said he didn't want the names of Harvard and Mass General associated with my theories."

As time went on, it seemed like Mass General made good on its threat. Every time McCully applied for a new job, things would seem to go well… but then the opportunity would suddenly evaporate.

McCully sniffed out rumors of "poison phone calls" from Harvard. "It smelled to high heaven," he said. "Eventually, I went to an attorney friend of mine… He made a few phone calls and it was all over."

It would take four decades of patient, careful research before other scientists recognized the importance of his findings.

The dangerous amino acid Dr. McCully was researching is called homocysteine. And a 2014 study published in *The Journal of the American Medical Association* found high homocysteine is as dangerous to your heart health as smoking!

Precisely how homocysteine raises heart disease risk isn't clear. But as McCully discovered so many decades ago, this amino acid attacks the lining of arteries.

It may be that atherosclerosis (i.e., hardening of the arteries) is the result of the body's attempt to heal those damaged arterial linings.

Plaques — roughly equivalent to scabs on wounds — accumulate as they patch the lesions. In the short term, the arteries narrow and stiffen, boosting blood pressure.

In the long term, they clot and burst, causing stroke and heart attack.

If that weren't bad enough, homocysteine also shrinks your brain. Seriously.

Fortunately, it's simple and cheap to keep your homocysteine levels in check (another reason you probably haven't heard about it before… selling *this* cure isn't lucrative). How, exactly, do you do that? Jasmine LeMaster will show you.

A Vitamin Almost Everyone Should Be Taking

It's Essential for a Healthy Heart, Brain, and Nerves… but Almost One in Two Are Deficient

There are three vitamins that are crucial for keeping homocysteine levels low: B-6, B-12, and folate.

The good news is most Americans likely don't need to supplement with B-6 or folate. If you eat a balanced diet with meat and seafood (for B-6) and dark, leafy greens (for folate), you're likely getting enough of both.

If you do decide to supplement, you need to be careful with B-6, as too much can build up in the body and lead to nerve damage. And if you supplement with folate, never choose folic acid, which is the synthetic version of folate. Up to 39 percent of people have trouble metabolizing it. A buildup of unmetabolized folic acid has been linked to cancer.

(As an aside, most refined grain products like cereals, breads, and cereal bars have been fortified with folic acid. Just another reason to avoid these products!)

Vitamin B-12, on the other hand, is one almost everyone should consider taking. Research suggests that up to 40 percent of adults have low B-12 levels, and that statistic climbs with age. B-12 is plentiful in red meat, but the body requires sufficient stomach acid and a carbohydrate-protein compound produced by the stomach, called intrinsic factor, to absorb B-12 from the food you eat.

As you age, both stomach acid and intrinsic factor levels decrease, making B-12 deficiency a major problem. Many older adults also take medications to lower stomach acid, further increasing their risk for low B-12.

In fact, the Institute of Medicine suggests that *all* adults over age 50 take a B-12 supplement or eat foods fortified with B-12. And if you're a vegan (i.e., you don't eat any animal-based foods, not even eggs or milk), you absolutely *must* get B-12 from a supplement, as it does not occur naturally in plants.

Even though B-12 deficiency is so widespread, many doctors do not regularly test their patients' blood levels. To make matters worse, even

though the "normal" range for B-12 is 200–900 picograms per milliliter (pg/mL), you can be in the normal range and still suffer symptoms of B-12 deficiency.

Aside from high homocysteine, other symptoms of B-12 deficiency include fatigue, neurological problems, poor memory, and mood disorders.

Getting enough of this vitamin is crucial to keeping your heart, brain, and nerves healthy.

Shellfish and animal liver are both excellent whole-food sources, but many people dislike or don't have regular access to these foods.

For most of us — even those under 50 and those who eat animal-based foods regularly — supplementing is usually a best choice.

SUPPLEMENTING WITH B-12

Not all B-12 supplements are created equal.

There are two main forms of B-12 in supplements: cyanocobalamin and methylcobalamin.

Cyanocobalamin is the B-12 molecule attached to a cyanide molecule. Supplement makers like this form because it is cheap and shelf-stable. However, as long as the two molecules remain bonded, it's completely inactive in the body. The cyanide molecule must be removed so that it can be converted to the active form of B-12.

Even though there is no definitive research showing that the amount of cyanide from this form of B-12 is harmful, why take the chance and make your body go through an extra conversion process when better options are available?

The form of B-12 I recommend is methylcobalamin. It is already in the form that is bioactive in your body, so no conversion is necessary. By taking the methylcobalamin form of B-12, your body will use it to keep your homocysteine levels low.

The other main thing to consider with B-12 supplements is the delivery system: capsule, liquid, or sublingual (under-the-tongue) tablets. So many people age 50 and older are deficient in B-12 because they lack the stomach acid and intrinsic factor necessary to absorb B-12. Both capsules and liquids still rely on stomach acid to be properly absorbed.

Sublingual tablets, however, don't require digestion and can increase the absorption of B-12. Absorption from sublingual forms may be up to 10 times greater than capsule forms. With sublingual tablets, the tablet dissolves and is rapidly absorbed through the membranes in your mouth.

There is also no need for water, making it much more convenient.

The Vitamin Combo for a Better Brain and Heart

The "Forgotten" Vitamin You Should be Taking Alongside Vitamin D

If you want to protect your brain, new research indicates the importance of focusing on the health of your heart.

In this new study, published this past March in an American Heart Association Journal, researchers measured markers of arterial stiffness in over 1,900 participants. Arterial stiffness causes the arteries to have a reduced ability to expand and accommodate the increase in blood flow with each pump of the heart.

The researchers also measured the white and gray matter integrity of the participants' brains.

They found that higher aortic stiffness was associated with reduced white matter and gray matter integrity.

The surprising finding? This aortic stiffening and brain matter integrity decline occurred in people as young as 40.

"This study shows for the first time that increasing arterial stiffness is detrimental to the brain, and that increasing stiffness… begin[s] in early middle life," said the study's lead author, Pauline Maillard, of the UC Davis Department of Neurology and Center for Neuroscience.

The researchers concluded that when blood vessels stiffen, it can reduce blood flow to the brain, thereby reducing brain function.

Other studies have found a link between the stiffness of arteries and higher levels of amyloid beta in the brain. Amyloid beta is a protein that builds up in the brain and must be constantly cleared. If it is not, it can damage neurons and lead to cognitive decline.

Stiffening of the arteries has also been associated with accelerated brain aging, brain shrinkage, and memory decline. In fact, levels of a specific marker for arterial stiffness have even been able to predict the development of cognitive decline.

So what causes arterial stiffness? Several things…

High blood pressure can put added stress on the muscular fibers in the arteries and eventually cause them to stiffen. Similar to how you may feel stiff after overdoing it in the gym, when your heart and arteries have to

work harder to pump blood, they can become stiff as well.

BUT HERE'S THE BIG SURPRISE...

A major factor of arterial stiffness that's relatively unknown to the public are calcium deposits in the arteries. When calcium gets directed into the arteries, rather than into bones where it belongs, it can, in a sense, "mineralize" the arteries and cause them to become stiff, thereby reducing blood flow.

This reduced blood flow can then potentially impact your brain function; in fact, the level of calcium deposits in the arteries has been associated with reduced brain size and cognitive function.

Luckily, there's a simple vitamin that can help make sure that calcium gets taken out of the bloodstream and put into the bones where it belongs, thereby helping to protect your arteries, and your brain. This vitamin has been shown to actually reverse arterial stiffening in healthy post-menopausal women with stiff arteries.

The vitamin is K2.

You may have heard of vitamin K1, which is crucial for blood clotting. But vitamin K2 has a very different function. It activates a protein called MGP, which escorts calcium out of your bloodstream and directs it into your bones.

Unfortunately, many Americans don't get enough of this vitamin from food, and many have never even heard of it. Unlike vitamin K1, which is common in most multivitamins and found in a variety of plant foods, vitamin K2 is not typically found in your average multivitamin pill. In addition, K2 is only found in high amounts in a select number of foods, many of which people have (misguidedly) been told to avoid, like full-fat cheese and egg yolks.

The importance of this vitamin for robust health, and the fact that so few people are getting an adequate supply, is why we decided to feature K2 in one of Gold Leaf Nutrionals' newest products: D3+K2. This combination of vitamin D3 and vitamin K2 can help your body absorb the calcium from the foods you eat and then move that calcium from your bloodstream into your bones.

Additionally, Gold Leaf Nutrionals' non-GMO D3+K2 formula contains 180 mcg of MenaQ7 K2, the exact form and research dose that was shown in a three-year human clinical study to actually reverse the stiffness of arteries in some post-menopausal women.

With D3+K2, you get the exact form and dose of vitamin K2 that you need to help keep your arteries flexible, promote proper blood flow, and help support the health of your brain.

4 STEPS TOWARDS A HEALTHY HEART

Poor food choices, high levels of sugar, and stress damage the body in the short run and have lasting effects in the long run, especially on your heart. And a healthy heart is the first step towards a healthier and longer life. Changing your diet today to strengthen and protect your heart could mean an extra 10 years in your life.

There are certain food restrictions and life changes you need to be aware of. Here are a few pointers.

- Eat More Salt — Though it might go against popular opinion, your body actually does need a healthy amount of salt to survive. Studies have shown diets with low salt intake were more likely to have higher mortality rates than diets with moderate salt intake. Long term salt deprivation could have serious negative consequences on your body.
- Get Married — It might surprise you, but having someone to share the rest of your life with could actually improve your health. Studies have shown that married men and women enjoy a better quality of life. Those who are happy in their marriage also have a 46% lower rate of mortality compared to single people.
- Have More Sex — Sex is great for your health. It's part of human nature and it can help reduce heart problems. Men who say they have sex at least twice a week are significantly healthier and are less likely to suffer from a heart attack. It also helps lower blood pressure, reduce stress, and even keep you emotionally healthy.
- Drink Alcohol — Drinking in moderation can actually be good for you. Studies have shown a drink or two can reduce the chance of heart disease in men. In fact, one study showed that light, moderate, and even heavy drinkers could reduce their chance of heart disease by 35%, 51%, and 54%, respectively. Though we don't recommend you become a heavy drinker because of the other negative consequences that go along with that. That being said, don't feel too guilty the next time you go out and have some drinks with your friends.

If you need more convincing that salt is actually good for you, here's some more information. The government was wrong when they said low sodium diets were good for you. They even tried to link salt to prob-

lems like high blood pressure and heart disease, though new studies have proven that false. In fact, low sodium diets have been linked with higher instances of insulin resistance. Consider natural salt options like sea salt when looking to add it into your diet.

PROTECT YOUR HEART WITH THIS 15 MINUTES EXERCISE

A lot of people refer to LDL cholesterol as "bad cholesterol" and many people blame it for a number of heart related problems. But when people have a heart attack only about half of them have high LDL cholesterol levels.

LDL cholesterol still plays a major part in many heart attacks. But new research is pointing to high blood pressure as having a bigger role. High blood pressure puts added pressure on the heart and causes it to work at high rates for an extended amount of time. This causes blood to pump through your system faster. Unless you take control of your high blood pressure now, you could be at risk of suffering a serious heart attack.

It's recommended that you take blood pressure medication to prevent a heart attack within the first 15-minutes of experiencing high blood pressure. This is the only "bullet proof" method of ridding high blood pressure quickly.

If you have the money, think about investing in a blood pressure machine. You can keep an eye on your blood pressure without having to see your doctor constantly. You can pick up a unit at an online retailers like Amazon for around $50.

THE FRENCH PARADOX HEART SOLUTION

Studies have shown French people have a diet just as unhealthy as Americans. They also have high rates of smoking and drinking. So why is it the French are 50% less likely to suffer from a heart attack than an American?

France and America don't see eye to eye when it comes to what they do in their downtime. Americans are normally hard working, and see rest and relaxation as something you do after you finish a day's work. The French, on the other hand, see things differently.

The average Frenchmen take their jobs seriously, but they also take their time-off just as serious. Long leisurely lunches, frequent naps, and vacations help relax their mind and body. This lessens the tension in the body and reduces stress. It also gives their bodies adequate time to rest. Invest in longer lunches, napping a bit more and schedule your next vaca-

tion to remove stress and add fun to your life. Doing this lessens the risk of heart disease!

If you happen to be out for a nice leisurely stroll during the summer, consider getting yourself a smoothie made with whole milk. The high levels of vitamin D will decrease your chances of developing heart disease.

THE $1.99 HYPERTENSION AND CHOLESTEROL SOLUTION

Eating garlic has been proven to help with your heart health. This simple seasoning has multiple purposes and many people swear by it. However, if you knew it could save your heart, would you eat it more often?

Garlic gives you access to an abundance of vitamins and minerals that can keep you healthy. When you eat it, you ingest a powerful compound called "allicin." This compound helps lower blood pressure to healthy levels. People who ate more garlic saw up to an 8% reduction in blood pressure.

Garlic is even known for softening arteries. This helps people who have limited flexibility and mobility. High levels of stress can lead to atherosclerosis, which may increase the possibility of a heart attack due to the strain on your body. Garlic reduces this risk by promoting flexibility and mobility. Lastly, studies have also shown garlic helps lower LDL cholesterol levels.

A MEXICAN "SUPER FOOD" THAT CAN STRENGTHEN YOUR HEART

Avocados are categorized as a "super food" and, often times, have multiple uses for curing diseases. Earlier you read about how avocados contained special compounds that reduce the risk of cancer. But they do more than just that. They also help reduce the chances of heart disease.

Avocados are a great food for your heart. They're low in trans-fat, saturated fat, cholesterol, and sodium. On top of all that, avocados help your body generally function better. They contain monosaturated fats, which lowers LDL (bad) cholesterol while promoting HDL (good) cholesterol.

There are plenty of ways you can incorporate it into your diet. Add it to a sandwich or use it to make guacamole. For an even tastier and healthier treat, add tomatoes and onions to your guacamole and top it off with some lime juice.

IT'S FINALLY OK TO EAT CHOCOLATE!

Commonly found in chocolate, **vitamin D** does more than provide your

body with necessary nutrients; it also can help reduce certain diseases, especially heart disease.

Unlike other vitamins, vitamin D has long-term health benefits. When you lack this vitamin, your skin begins to deteriorate, causing your complexion to fade. It may even cause your skin to wrinkle.

Making sure you have enough vitamin D in your system every day will give you a healthier body in no time. When taking vitamin D, you're able to prevent immune disorders, diabetes, and osteoarthritis. Vitamin D can even regulate your heart and prevent it from going into "overdrive" when facing stress or strain.

STOP BLAMING SALT! THE REAL CULPRIT BEHIND YOUR HIGH BLOOD PRESSURE

Stress is one of the biggest reasons why so many people have heart disease. When you're faced with a lot of stress, your body goes into overdrive.

One way your body changes during stressful times is by raising its blood pressure. Pumping more blood can make your body wake itself up and can send adrenaline rushing through your system. You might think this sounds like a good thing, but it also increases your chance of having a heart attack.

Heart problems are often associated with high levels of stress. Anything above normal blood pressure could alter your eating habits and lead you to an unhealthy diet. Stress brings on sugar cravings that can spike your insulin levels. Once those levels spike, your blood pressure may increase for a short amount of time. It's during this time when a heart attack may incur.

Reducing stress may be the single important aspect of your treatment for heart disease. Yoga and pilates are excellent ways to get it under control. In fact, any moderate exercise is good for you in the long run.

THE CENTRAL AMERICAN HYPERTENSION KILLER

Do you consume enough **vitamin D3** in your diet? The recommended daily value of vitamin D is 200 IU for any adult under the age of 50, 400 for adults 51–70 and 600 IU for adults over 70. But why does the recommended value of the vitamin increase as we age?

As our bodies get older, they begin to deteriorate. So it's important to listen to your body and not to overexert yourself. In fact, if you are overly active, increasing your vitamin D3 intake is a must.

Vitamin D3 is known as a cholecalciferol and it's a vitamin obtained in a synthetic form such as a pill. This vitamin is able to increase the amount of "good" cholesterol ("HDL Cholesterol") in your body. The more good cholesterol you have, the better. It also regulates the heart and protects it from high blood pressure.

THE HEALTHY HEART SECRET BURIED WITH THE ANCIENT MUMMIES

While not all seafood may be "heart healthy," certain fish such as salmon and mackerel contain a vital nutrient for assisting with heart health. **Omega-3** and **omega-6** fatty acids derive from the natural oil fish produce. They're even available over-the-counter at your local pharmacy.

Research has shown that omega-3 fatty acids lower both blood pressure and triglycerine levels. Lowered levels of triglycerine and blood pressure help reduce the risk of heart attacks, strokes and even death from heart disease. Even further, you can lessen the painful symptoms of rheumatoid arthritis.

Take fish oil capsules if you are unable to eat enough fish. If you are vegetarian or vegan, flaxseed is a good alternative. They're slightly different, but still just as effective. And, of course, you could get your fill by substituting one of your weekly meals with fish.

Did you know krill oil can also protect your skin from damage caused by the sun?

STOP BLOOD CLOTS BEFORE THEY EVEN FORM

Flavonoid is a basic compound found in many fruits and vegetables. However, what really makes flavonoid unique and healthy is a compound found inside of it. This compound is commonly known as "**rutin**." Because Americans often don't consume enough flavonoid, we usually don't consume a healthy amount of rutin. In fact, American diets lack this nutrient so much that some scientists suspect this could be why the number one cause of death in the U.S. is heart disease and stroke. A simple change in your diet can affect your lifespan and way of life.

Found inside our cells is a substance called, "protein disulfide isomerase ("PDI"). All animals secrete this substance. This protein could create something called a thrombosis, a potentially fatal blood clot. However, consuming fruits and vegetables rich in flavonoid could decrease the chance of a thrombosis forming. Consuming more fruits and vegetables

will increase the amount of flavonoid in your body, which will decrease the risk of other heart related ailments.

Instead of taking a potentially dangerous blood thinner that could cause menstrual bleeding, red or brown urine, or could make your bowel movements look like tar, consider eating foods high in flavonoid rutin. These include: apples, onions, citrus fruits, and asparagus.

THE "GLASS HALF FULL" HEALTH SOLUTION

Reducing stress is one method of reducing heart disease. In addition to removing stress, your way of thinking also affects the health of your heart. Studies have shown that people who have a more positive outlook on life decrease their chances of illnesses and other dangers.

What makes the power of thought so important to heart health?

It's all about how you look at life. Naturally, your body will act accordingly. The more negative you think, the more that negatively affects your body. This can cause unnecessary stress and, in addition, high blood pressure.

Positive thinking can do the opposite.

In addition, many diseases only become fatal if you believe they will be. The mind has a lot of power over the way our body reacts. So clear your mind, become a more optimistic person, look at the glass half full, and you could possibly save yourself from a life-threatening heart attack.

WHIP UP A BATCH OF "HYPERTENSION SOUP"

Gazpacho soup is a traditional cold tomato soup that originated in Spain but is common in many Mediterranean dishes. What makes gazpacho soup so beneficial is that it's made up of six super foods: tomatoes, cucumber, bell peppers, olive oil, onions and garlic.

Garlic is a known preventive for heart attacks by reducing blood pressure. There is a special ingredient called "allinin" which helps with reduce blood pressure. Tomatoes are high in lycopene and help reduce heart disease. This antioxidant assists with lowering blood pressure significantly and can help reduce clogs in your arteries.

In combination with the other vegetables, gazpacho is filled with flavonoids, containing the compound rutin. Rutin is known for preventing heart attacks by reducing the amount of a certain protein developed within the body. Even further, it helps reduce the risk of blood clots by thinning the blood.

THE SLEEP HEALTH HACK TO ENSURE YOU WAKE UP TOMORROW

Water is a solution for many problems. Which makes sense since it's an essential part of life. No other liquid can be consumed at such high levels the way water can be consumed.

Consuming water does more than just hydrate your body. It can also help with basic bodily functions like improving blood flow. Consistent water intake will help your body naturally thin your blood as opposed to taking a life-threatening blood thinner.

Thicker blood takes more time to process through the blood stream. If you decide to increase water how much water you drink, you can potentially reduce the risk of clogged arteries. Drink a few more glasses of water a day and you can decrease your rate of a heart attack as much as 50%.

Water might be a great natural sleep remedy, but don't go overboard drinking it. In fact, the old advice saying you should drink at least eight cups of water a day could be detrimental to your health. Why? Because too much water throws off the electrolyte balance in your body. Drinking water to cleanse your body of harmful toxins is great… to a point. Too much water might rid your body of essential minerals, disrupting your body's natural chemical balance. This could lead to water intoxication with symptoms like headaches, drowsiness, and irritability. Also, if you really want to make sure you're drinking and using the cleanest water possible, look into installing a whole house filter. Check out waterfilers.mercola.com for more information about how you can get your hands on one.

NORTH PAKISTAN'S HIDDEN HEART CURE

The Hunza are a group of people who live in the Himalayan Mountains in Pakistan. These people have been living nearly disease-free for hundreds of years and some of them are well over 100 years old. What makes them even more spectacular is that they do not use a lot of modern medicine. In fact, they mainly use natural remedies.

One main reason behind their health and longevity is the food they eat, in particular their traditional **Hunza bread.** It accompanies practically every meal. The grain is preserved and matured for as long as possible and they only grind as much as they need for each meal. This grain provides the people with tasty bread that does not go bad. In addition, the grain is great for your heart since it reduces stress by slowing and regulating blood flow.

Hunza Bread isn't the only cure originating in the Himalayans. The Ayuvedic herb known as Bacopa sharpens your brain, improves memory, and enhances cognitive function. You can purchase the herb in caplet form.

THE 60 SECOND HEART ATTACK STOPPER

Heart attacks are one of the most common heart disease cases in America. It happens often due to a combination of high stress levels, blocked arteries and high cholesterol. The most common symptom of an oncoming heart attack is tingling or pain in your left arm. However, did you know you could stop that right in its tracks?

Cayenne pepper is one of the most uncommon saviors in stopping a heart attack. Capsaicin, an active component in cayenne pepper, helps stimulate warm circulation in blood. This stimulates the heart and arteries, giving your body the ability to return to normal.

It takes less than 60 seconds for the effects of cayenne pepper to set in. If you think you or someone you know might be having a heart attack, mix one teaspoon of cayenne pepper in warm water. Drink it immediately before you lose consciousness. Hopefully, in less than a minute, the heart attack will go away.

As if preventing a heart attack isn't a good enough reason to keep the pepper permanently stocked in your house, it could also help reduce LDL cholesterol in your system.

THE ONE FOOD YOU CAN EAT TO "TURN OFF" HEART DISEASE

Beetroots, spinach, celery, radishes and lettuces have the most amount of healthy dietary nitrates available. Stick within this range and it will help you find cures to diseases such as heart disease and diabetes. Dietary nitrates possess a compound known as nitric oxide, which assists in maintaining a molecules' contractility and strengthens vascular smooth muscle cells. Nitric oxide has been linked to improving vascular health and preventing the proliferation of cells in the heart.

Many leafy greens also contain flavonoid rutin and vitamin D. These help maintain a healthy heart. Additionally, both of these vitamins and minerals can naturally thin your blood, decreasing your chance of contracting a blood clot. Leafy greens should be eaten on a daily basis for the nutrients they contain.

WHY YOU SHOULD STICK TO THE ORIGINAL WHITE MEAT

Vegetarians and vegans might miss out on this next solution. Eating meats other than chicken could be more hazardous for your health. Fats and high levels of salt in traditional meats like pork clog arteries and could lead to other health problems. Once they're clogged, blood clots begin to form and it could results in a backwards flow of blood. This could cause the heart to speed up rapidly and may result in a greater chance of a heart attack.

Eating chicken could prevent all this. It's low in sodium, carbs and fats, and the meat is lean, making it easier for you to digest.

DON'T FEEL GUILTY ABOUT ORDERING THAT STEAK

Red meat's gotten a bad rap over the years. It's been blamed as contributing to heart disease, cancer, and it's even been accused of speeding up aging. But people who make these claims aren't presenting all the facts.

For example, if you have an active lifestyle the negative effects of red meat are not as pronounced. Sedentary and inactive lifestyles exacerbate the problems brought on by red meat. If you're burning a high number of calories every day through daily exercising, you'll absorb more protein from red meat and mitigate the negative side effects.

Just look at any bodybuilder or athlete. For many of them, red meat and other high protein meats are a main part of their diets. Half a pound of red meat has up to 15mg of vitamin B3, also known as niacin. This substance aids with digestion, helps production of good cholesterol, and expands and dilates blood vessels.

Also, remember not to overcook your meat. Cooking it to medium will maximize its health potential and decrease your risk of developing certain cancers.

Additionally, red meat is an excellent source of zinc, iron, and selenium. Zinc increases sperm count in men, and helps keep the prostate healthy. Overall, red meats helps increase oxygen levels in the blood stream, lowers the chance of developing heart problems, and can even boost the immune system. But remember, you'll need to maintain an active lifestyle to enjoy these positive benefits.

Speaking of selenium, did you know diets high in the substance have been known to have lower instances of some forms of cancers. One study

showed that Japanese and Bulgarian diets, known for their high levels of selenium, produced lower instances of mammary tumors in mice.

YOUR VEGETARIAN FRIENDS ARE WRONG

The next time your vegetarian friend tries to make you feel guilty because you ordered a steak, tell him to calm down. His vegetarian lifestyle might not offer all the health benefits he thinks it does. In fact, there might not be any life expectancy advantages from removing meat from your diet.

Eating fruits and vegetables along with grains, dairy, and eggs provides you with many necessary nutrients. But that still doesn't overcome the nutrients lost by forgoing meat. A healthy active lifestyle along with a diet with healthy proportions of meat can improve life expectancy. Skipping out on the meat might save you money, but it won't save you the years of your life.

CHECK YOURSELF FOR THIS HEART RISK FACTOR IMMEDIATELY

The next time you see your doctor, ask him to make sure the level of homocysteine in your body is normal. High concentrations of this amino acid could indicate a higher risk of having a stroke or a heart attack. If you have a family history of heart disease, but do not have any other obvious risk factors, it might be a good idea to ask for this test.

TELOMERES

In 2009, Elizabeth H. Blackburn, Carol W. Greider and Jack W. Szostak received the Nobel Prize in Medicine for a discovery that would stun the world…

Through their research, they had discovered that chromosomes contain an element that helps to protect them from degradation, even during the cell division that happens through our lives. This protection comes from the ends of the chromosomes — known as telomeres — and an enzyme that they produce called telomerase.

Although the science was new, it seemed telomeres could be the key to a longer or shorter life. In theory, protecting those chromosomes could extend their life, and the human life as a result. On the other hand, their disintegration would theoretically shorten it.

That's the story most people know.

But there's another story…

While shortened telomeres have been linked to accelerated aging, the questions scientists are now asking are:

Are shortened telomeres just a sign of aging, like gray hair, OR Do shortened telomeres actually contribute to aging?

Scientists are not yet sure.

Some long-lived species like humans have telomeres that are much shorter than species like mice, which live only a few years. Nobody knows why. But it's evidence that telomeres alone do not dictate lifespan.

But they have been able to use telomerase in the lab to keep human cells dividing far beyond their normal limit… meaning the cells live longer, and they've been able to do it without the cells becoming cancerous.

The implications could one day lead to immortalized human cells that help to cure debilitating diseases such as diabetes, muscular dystrophy, heal arthritis, and severe burns and wounds.

Geneticist Richard Cawthon says that if all processes of aging could be eliminated and oxidative stress damage could be repaired, "one estimate is people could live 1,000 years."

While we're a long way off from knowing if that will in fact be a reality, what we do know is certain foods, supplements and lifestyle changes have been shown to slow aging. And that's what *Trick Your Body Young* is all about.

While telomerase has something to do with these improvements, scientists still can't say if it's a cause or an effect.

Now that you know the questions researchers are now trying to answer about telomeres and telomerase, let's take a look at some of the most exciting research they've performed…

THE HARVARD HEART MIRACLE

Scientists at Harvard were stunned by the results of a recent study, which showed drastic reversal of aging in mice.

It is their hope that the same technology will be able to regenerate human organs as well.

A study published in the journal Nature explains that aging is caused largely by stem cell depletion. Each stem cell comes with a protective cap which keeps it from fraying, called a telomere. Think of telomeres like the protective plastic cap on the ends of your shoelaces.

Each time a stem cell divides, its telomeres shorten. Eventually that causes the stem cell line to end, after which the cells die.

Shorter telomeres essentially lead to the decaying of the body — cardiovascular and pulmonary issues, memory loss, and the of loss muscle use and definition all can be attributed to shorter telomeres. Cancer rates also rise as a result.They're the key to most diseases of aging.

Robert DePinho, the scientist leading the study, said that "What we saw in these animals was not a slowing down or stabilization of the aging process. We saw a dramatic reversal — and that was unexpected."

They were able to reactivate telomerase activity. Telomerase is an enzyme responsible for rebuilding telomeres.

It is now their hope that the same beneficial, anti-aging effects can happen in humans. If so, they could very well have found a "youth gene" that will help protect against the common diseases of aging.

He went on to explain that "This could lead to strategies that enhance the regenerative potential of organs as individuals age and so increase their quality of life. Whether it serves to increase longevity is a question we are not yet in a position to answer."

To date, "over 4,000 peer-reviewed scientific publications relate to telomere biology and aging or disease."

There is a telomerase supplement available. It's called TA-65, and is available on the market. In fact, Dustin Keller, a right end for the Miami Dolphins, has used it to shorten his recovery times.

The thing is, TA-65 is very expensive. Not all of us are being paid NFL salaries. And why should the secret to remaining young be only for the rich?

Luckily, you don't need a supplement to protect your telomeres. There are a ton of natural, easy ways to lengthen your telomeres and stop your cells from aging.

You might be able to stay young as a result. Read on for solutions.

A GLASS A DAY KEEPS HEART ATTACKS AT BAY

One secret that will help protect your telomeres is resveratrol.

Resveratrol can help to cancel out the effects of aging. It does so by activating proteins called sirtuins which your body produces in times of stress.

These in turn slow telomere shortening, naturally giving your body more time to heal.

In a study following almost 20,000 people, shortened telomeres increased the risk of heart attack by 50%. To make matters worse, early death risk was increased by 25%.

Resveratrol has also been shown to help stimulate cells to produce more mitochondria, the organelle responsible for providing energy.

In one study, resveratrol protected rats against inflammation and cardiovascular damage as a result of aging. These conditions had no effect on the rats treated with resveratrol.

It has also been shown to improve the results of exercise in mice, improving oxygen use and aerobic capacity as well as contributing to increased endurance.

Luckily, resveratrol is not hard to come by. Small amounts of it are present in peanuts, grapes, blueberries and cranberries.

However, the best source of resveratrol, hands down, is red wine.

The Mayo Clinic explains that red wine has a mix of antioxidants and resveratrol that help to increase "good" HDL cholesterol and protect against artery damage. While this hasn't been proven, there is enough evidence to suggest a major correlation. Drinking a glass or two of red wine to end your day could have health benefits — and at the very least, it won't hurt you.

ITADORI TEA

Made from the root of Japanese knotweed, Itadori tea is very high in resveratrol. In fact, it is the second-highest source of resveratrol, with only red wine beating it. Adding it to your daily diet could help protect yourself against heart attacks and strokes.

After all, it's been used in Asia for over a thousand years as a remedy for those conditions.

Drinking Itadori tea is a great alternative source of resveratrol for those who do not drink alcohol.

Getting pre-made Itadori tea can be difficult. However, it is a very common plant in the United States (usually seen as a weed!) You should be able to purchase it online or at a local botanist.

Young shoots are easier to work with and make better tea. If you use the stems of older knotweed, chop or break them.

Cover with water and bring to a boil. After the water comes to a boil, allow it to simmer for 20–30 minutes.

Strain and serve. You can add sugar or berries for taste!

THE LUNGS OF A 25-YEAR-OLD... AT 50!

Few people think about this, but lungs grow and change throughout a

person's life. As we age, cells within our lungs start to die off and the body stops being able to replace them. This causes our lungs to shrink over time.

Unhealthy lungs can get in the way of a healthy, active lifestyle — exercising can become difficult, along with simpler, everyday activities. Eventually, even walking up a flight of steps can become a challenge.

But there's another, more startling revelation when it comes to lung health. The less healthy your lungs are at any age, the greater the chance you have of dying.

Researchers at the University of Buffalo spent 30 years examining the association between impaired lung function and all causes of death.

The results, published in the September 2000 issue of *Chest* and summarized in a news release by the university, "found that the 20% of men with the poorest lung function when the study began were more than twice as likely to have died during follow-up than men with the best lung function. Women in the lowest group were more than 1 1/2 times more likely to have died."

Lung function acts as a significant predictor of how long you will live.

So, if healthy lungs are so important, how can we make sure we have them?

A few answers seem obvious — smoking, for instance. But the UB researchers actually found that increased risk was found in those who never smoked, as well as smokers.

The real secret to maintaining your lung health is to maintain your telomeres.

In 2008, researchers at Johns Hopkins were able to discover that short telomeres were the cause of the deadly lung disease idiopathic pulmonary fibrosis (IPF), which "causes a progressive and almost always lethal scarring of the lungs."

The disease had previously been believed to be immune-mediated, but scientists could not find a cause, which prevented successful treatment of the disease.

The connection to telomeres could be life-saving, not only for patients suffering from IPF, but also for patients with other lung diseases.

As the Johns Hopkins Medicine article explained, "telomeres act as a clock mechanism in cells, and short telomeres can limit the life expectancy of certain cells within the lung."

Shortened telomeres lead to shrivelled lungs and a shorter lifespan.

With a bigger lung capacity and longer telomeres, you'll be able to extend your life.

Simple lifestyle changes — improving your diet, gentle exercise, stress management and social support — have an incredible impact on telomere length. Implementing these kinds of simple changes could increase your lifespan.

QUEEN ELIZABETH TRICK

Her Royal Highness is an incredible example of "aging well." At 88, she has been Queen since she was just 25 years old.

Still the active reigning monarch of the United Kingdom, Queen Elizabeth has survived more than five decades taxed with the stressful responsibility of being the face of a nation. And, might we add, her face looks remarkably young for a woman of her age.

So what's the secret to her success? Part of it just might have to do with what she eats during tea time.

One food in particular can ward off inflammation, improve heart health, help you sleep and fight macular degeneration.

The answer is the Queen's lox.

Salmon is a great source of antioxidants, particularly one called "astaxanthin" that is 6,000 times more effective than vitamin C, 800 times more powerful that CoQ10 and 550 times more effective than vitamin E and green tea.

Astaxanthin is basically a superfood for your eyes. It has been found to increase blood flow to the eyes, as well as suppressing VEGF, a protein that causes macular degeneration. A Chinese hospital recently published a study which found that astaxanthin helps to fight off oxidative damage as well, something that the eyes become much more vulnerable to as we age.

Eye health is not an uncommon problem in the United States. Right now, it is estimated that 15 million Americans are going blind from some sort of macular degeneration, often caused by old age.

Antioxidants, particularly astaxanthin, have also been associated with longer telomere lengths.

Follow the Queen's lead and add salmon to your diet to help keep your eyes young and healthy, and lengthen your telomeres to boot.

CHOLESTEROL

For most people over 50, the big barometer of heart health seems to be

their LDL cholesterol, in relation to their triglycerides, as well as their HDL cholesterol. Conventional medicine suggests you've got to watch your bad cholesterol like a hawk and gulp down pills to get it into the right ratio.

People whose cholesterol is out of ratio often get talked into taking cholesterol drugs called Statins.

Statins come with a dirty laundry list of problems.

That's because not only do they inhibit production of cholesterol, they interfere with other intermediary substances which have important biochemical functions.

For example, they deplete the body of Coenzyme Q10 (CoQ10) which is vital to heart health and muscle function.

Most doctors aren't really up to speed on the true dangers of Statins. Too many times, patients came down with fatigue, muscle weakness, soreness, and in some cases, heart failure. Statin drugs are also linked to:

- Nerve damage in the hands and feet.
- Dizzy spells.
- Memory loss.
- Higher cancer risk.
- Weakened immune system.
- Depression.
- Liver problems.

OK, fine. There are side effects. So are these drugs effective?

Let's look at Pfizer's Lipitor, which is the most prescribed cholesterol medication in the world and has been prescribed to more than 26 million Americans.

According to Lipitor's own Web site, Lipitor is proven to lower bad cholesterol 39–60 percent, depending on the dose. Sounds effective, right?

Well, *BusinessWeek* did an excellent story on this topic and they found the real numbers right on Pfizer's own newspaper ad for Lipitor.

Upon first glance, the ad claims Lipitor reduces heart attacks by 36 percent. But there's an asterisk. And when you follow that asterisk, you find the following in smaller type:

"That means in a large clinical study, 3% of patients taking a sugar pill or placebo had a heart attack compared to 2% of patients taking Lipitor."

What this means is that for every 100 people who took the drug over 3.3 years, three people on placebos, and two people on Lipitor, had heart attacks.

So taking Lipitor resulted in just one fewer heart attack per 100 people.

This drug is barely more effective than the placebo!

But these aren't the only cholesterol lowering drugs being prescribed, there's Zetia and Vytorin among others.

Look — Mother Nature has solutions for your cholesterol. And her solutions definitely outperform placebos. Plus… they come with few if any side effects

VITAMIN "Q"— THE VITAMIN DRUG COMPANIES TRIED TO PATENT

Coenzyme Q10 (CoQ10) is a component found in every cell in the human body. The body naturally produces the substance and uses it to produce the energy your cells need for growth. Furthermore, the component is known to work as an antioxidant, protecting the body from damage. What makes this component unique is its ability to help reduce cholesterol levels in your body.

When you take a CoQ10 supplement, you'll immediately feel lighter on your feet and your body will be able to handle more damage.

However, before taking the supplement, make sure you tell your doctor. CoQ10 also seems to show signs of lowering cholesterol levels by acting as an antioxidant and removing bad molecules from the body, including LDL cholesterol.

THE CHOLESTEROL KILLER THAT COULD HELP YOU LOSE WEIGHT

There are a number of foods that have such tremendous effects on the body we call them "super foods." **Macadamia nuts** are one of those foods. This fat has been shown to assist with heart health.

Out of any other oil, macadamia oil has one of the highest concentrations of monosaturated fats. Monosaturated fats are "good fats" that help promote HDL Cholesterol (the good kind) in the body, while also lowering LDL cholesterol.

Macadamia oil has one of the most potent effects on the heart and can return your health from bad to good if you incorporate it into your diet. In addition to lowering LDL cholesterol, macadamia oil has high levels of oleic acid, which helps improve memory, reduces inflammation and increases testosterone levels.

Check out coconut oil for a safe and healthy way to control your

weight. It's anti-microbial, anti-histamine, and anti-diabetic. It's another miracle food you can only find in nature (and not in some scientist's lab). And if you really want to kick things up a notch, consider using coconut oil the next time you want fried food. It's a healthy alternative that adds incredible flavor to whatever meal you're making.

THE CHOLESTEROL CURE HIDING IN THE ASIAN FOOD SECTION

Red yeast rice is a traditional staple in Chinese medicine and has been proven to assist with lowering cholesterol levels. Red yeast rice is now sold in over-the-counter supplements at your pharmacy or local grocery store. While sometimes inconvenient to get, the benefits make purchasing the supplement a necessity for improved heart health.

Red yeast rice has been shown to reduce cholesterol levels. When a patient took 2.4 grams of red yeast rice per day, it reduced their LDL levels an average of 22%. Overall, you could expect to see a decrease in cholesterol of around 16% after 12 weeks. Red yeast rice covers your body with a lining that prevents LDL cholesterol from being absorbed excessively through the blood stream and potentially causing a blocked artery.

On average, the recommended value of red yeast rice you should digest daily is between 1.3 to 2.4 grams per day. This will help the body remove LDL cholesterol over time, improving heart function.

Just a word of warning when it comes to supplements. Make sure you don't overdo it. Supplements can be a great way to get important nutrients into your body, but going overboard can be disastrous (and it might lead to a number of eye problems). Follow the instructions and consult a professional who understands your personal health needs, if possible.

A REVOLUTIONARY WAY OF REMOVING POISONS FROM YOUR BODY

Chelation therapy is an alternative medical technique that involves administering specific substances to reduce and remove heavy metals from your body. This kind of therapy is very effective in removing certain toxins and poisons, such as lead and arsenic, that might have found their way into your body.

The process involves injecting the synthetic solution ethylenediaminetetraacetic acid (EDTA) into your body. It then bonds with harmful heavy metals and makes it easier for your body to flush out the poison

safely. It's believed that EDTA acts like an antioxidant and helps promote and protect your body's immune system.

Some health officials also believe chelation therapy can be used to attach and remove LDL cholesterol from your system. People have also reported less pain and complications from diseases and ailments such as lupus, arthritis and scleroderma.

Care should be taken when considering chelation therapy. Thorough research, as well as approval from your doctor, should be taken before you decide to undergo this treatment option.

TEN STEP PLAN TO PLAN TO PRESERVE TELOMERES AND SLOW AGING

I often say, whether slow telomere shortening is a cause or effect of aging remains unclear, but ultimately, that's not terribly important. The steps we discuss here are all associated with lengthened lifespans and lengthened telomeres, so why not make them a part of your life?

Some of these lifestyle changes might be things you already do, in which case you're one step ahead when it comes to disease prevention.

Below is my advice on how to lengthen your life — and potentially your telomeres — with hardly any effort at all. These methods are low tech and low-cost, and will make a huge difference in how you age.

1. **Eat less.** Be conscious of your diet, in all aspects. This can change from person to person, but as a general rule of thumb we recommend eating more fruits, vegetables and low-calorie proteins. Limit your intake of carbohydrates, including grains and sugars.

Obesity leads to chronic inflammation and oxidative damage, which is linked to shorter telomeres. Being mindful of your weight and watching what you eat can eliminate the chance of obesity accelerating your aging.

2. **Be conscientious.** This means taking care, rather than being careless, in every aspect of your life. Be mindful of what you eat, the steps you take to protect your health, how you treat your friends and family, and more.

U.S. News reported that a study begun in 1921 tracked the lives of children over the course of eight decades. Two professors involved in the study explained that "The best childhood personality predictor of longevity was conscientiousness — the qualities of a prudent, persistent, well organized person."

Conscientious people are more likely to follow health guidelines, avoid smoking, take prescriptions and go to the doctor when necessary. They also tend to be less prone to disease.

Being aware of how you treat your body, and taking the necessary steps to protect it, is absolutely necessary if you want to remain healthy.

3. **Get plenty of gentle exercise.** Walking is enough to stimulate your body and encourage telomere growth.

Carmelo Flores Laura is a native of Bolivia who has spent his life living in an isolated

hamlet. He recently became the oldest living person ever documented — 123 years old in 2013.

When the Associated Press interviewed Laura and asked his secret to success, he told them "I walk a lot, that's all. I go out with the animals."

Exercise has the added benefit of relieving stress, which can be a telomere-saver as well.

4. **Be optimistic.** Having a positive outlook won't just make your life more enjoyable — it could actually extend it.

Researchers at the Albert Einstein College of Medicine studied a group of Ashkenazi

Jews to determine what factors might contribute to the long lives of centenarians. The results, published in 2012 in the journal *Aging*, revealed that having an optimistic outlook, and remaining social, contributed to their long lives.

The 243 participants, all over the age of 95, "were outgoing, optimistic and easygoing.

They considered laughter an important part of life and had a large social network."

Staying positive can help you survive the inevitable trials in life so you can appreciate the good things!

5. **Get (and stay) married. T**hese days, this can be shocking advice to read. How many people do you know who have actually stayed together, happily?

New research shows that those special few who do might outlive the rest of us.

A study done by the Duke University Medical Center studied more

than 4,800 people who were born during the 1940's. Out of the group, those people who never got married were more than twice as likely to suffer an early death than those people who had a consistent partner during their middle ages.

Married people showed lower risks of heart disease, cancer, depression and stress.

The lesson here is the right partner could very well keep you young — and alive!

6. **Eat well.** Specifically, eat an unprocessed diet of whole foods with an emphasis on fish.

A study from the Harvard School of Public Health and the University of Washington found that adults with higher level of omega-3 fatty acids in their blood have a significantly lower chance of developing heart disease.

Their overall mortality risk was also lowered by as much as 27%.

Studies have found that taking omega-3 fatty acid supplements, or eating a diet that's rich in them, lead to longer telomeres in blood cells.

The best source of omega-3's is fatty seafood — adding fish to your diet such as tuna, salmon, trout, sardines and even mussels could help extend your life and will ultimately promote a healthier lifestyle.

7. **Get enough sleep.** It turns out, sleep deprivation can pose an even greater risk than we once thought.

In a study done at the Pennsylvania State University College of Medicine, researchers found that mortality rates were significantly increased for men who slept less than six hours a night.

Sleeping is a healing process, necessary for the revitalization of our minds and bodies.

Getting enough sleep at night can lengthen your telomeres and ensure that your body has the strength to fight against disease.

8. **Drink coffee.** Not only will that morning cup of Joe perk you up, it provides a whole host of other benefits.

The European Science Foundation reports that moderate coffee consumption could help prevent Type 2 diabetes.

Those who drank three to four cups of coffee per day were associated with a 25% lower risk of developing Type 2 diabetes.

Although research has not been able to show a causal effect, and more

studies will need to be done to show how and why this association occurs, moderate coffee consumption has also been shown to stimulate metabolism. (More details on caffeine's health benefits are found in chapter three.)

9. **Have a sense of purpose.** Findings published by Carleton University in Canada found that having direction and goals can predict a lower risk of mortality throughout a person's life.

That means that having a clear sense of purpose can help to extend one's life at any age — whether you're a young adult, middle-aged or elderly.

10. **Get a pet.** The benefits of owning a pet have been widely studied, and the results are pretty incredible.

Pets help lower stress and anxiety, have been shown to lower your blood pressure, and even boost neural activity in seniors, helping to keep elderly minds active and healthy. They're thought to help cancer patients cope with their treatments, and provide structure and routine for children.

A recent study from the Minnesota Stroke Institute also found that owning a cat can improve heart health, lowering the risk of heart attack by 30%. They believe that similar results would be found with dog owners.

Pets can fill a social void, providing the companionship and interaction that is associated with longer telomeres.

These simple lifestyle changes are easy to implement, cost little or nothing, and will help improve your quality of life. When you add the possibility of extending your lifespan into that mix, what's stopping you from giving them a try?

GET A "QUIZ SHOW" BRAIN IN JUST SECONDS A DAY

Let's be honest — one of the scariest things about growing older is losing your memory. "Senior moments" are something that we all dread, and they make us feel our age even more than the sight of wrinkles in the mirror. The idea of being trapped in your own body with no ability to recall your own life events — what you did last week, your children's names, your favorite childhood vacation — is something none of us want to experience.

Luckily, there are a number of tricks that will help easily improve your memory's function and strengthen your mind. And most of them take just a few minutes to complete!

The earlier you start taking measures to preserve your brain function, the better. Here are some of the most effective practices.

THE GREEK SECRET

The Method of Loci was developed and recorded in ancient Roman and Greek treatises, such as *Cicero's Di Oratore and Quintillan's Institutio Oratoria.* Since that time, it has been studied and extensively expanded, as well as depicted in countless books, television shows and movies. Hannibal Lector and Sherlock Holmes have both been known to walk through "palaces in their minds" to retrieve relevant information — that is the Method of Loci.

At its core, the Method of Loci is a memory enhancement tool focusing on visualization. It's all about concentrating on spatial learning.

Loci actually is Latin for "location." By using the Method of Loci, you

are supposed to design a building or a street in your mind. By assigning each subsequent location a fact, you will be able to "walk down memory lane" in the most literal sense.

John O'Keefe and Lynn Nadel published a study called The Hippocampus as a Cognitive Map. They describe the Method of Loci, saying

In this technique the subject memorizes the layout of some building, or the arrangement of shops on a street, or any geographical entity which is composed of a number of discrete loci. When desiring to remember a set of items the subject literally 'walks' through these loci and commits an item to each one by forming an image between the item and any distinguishing feature of that locus. Retrieval of items is achieved by 'walking' through the loci, allowing the latter to activate the desired items.

By assigning each fact a physical location in your memory, you can connect all of the information and more smoothly walk through it. Spatial memory is so strong that your mind will be able to connect the places you're imagining, and the subsequent facts you've attached to those locations.

You could use something as familiar and personal as your childhood home, or a famous landmark like the Sistine Chapel's ceiling to deposit memories. As long as you can clearly picture the location and walk through it in your mind, you'll be able to recall them as you go along.

This method is extremely effective for improving your memorization skills. In one study done in Malardalen University, Sweden's School of Education, Culture and Communication, high school students were taught the loci method as well as another tool called the "reminiscent technique" in order to focus on memorizing new vocabulary.

The results were so positive that it was determined that the loci method would be effective not just for the familiar, but also for learning foreign languages more easily. As they explain, "research within second language studies recommends using mnemonic techniques as a help to retrieve words."

Mnemonic techniques "provide structure and organization as a help to memorize certain material," writes Nina Behr, the author of the study. As a result, recalling new words from a foreign language becomes easier once you organize your mind to associate those new words with old memories-or, in this case, rooms in a house.

It only takes a few seconds to attach a word to a location and add it to your mind's map, but once you do it will be there forever.

30-SECOND SHOWER TRICK

Ron White is a two-time winner of the USA Memory Championship. A veteran of the U.S. Navy, White held the record for being the fastest person to memorize a deck of cards for two years — his time was one minute and 27 seconds.

Despite this amazing feat, his secret to improving his memory is so simple we all can do it.

Just close your eyes while you shower.

According to White, "it will break your routine and engage your senses." Searching for the items in your shower while mentally noticing textures and locations gives your brain a workout and helps to strengthen it. As simple as it seems, making your mind work a little overtime helps to enhance your focus.

What many people don't realize about memory contest champions is that they are no more intelligent than the average Joe. They simply know what parts of their brain to use in order to boost memory.

For Ron, years of practice to train his mind to be the most efficient has paid off. He appeared on an episode of Stan Lee's "Superhuman." On

Ron's website, it details that during the show,

...they went to the University of Texas at Austin and conducted scientific studies on Ron's brain. Ron was the first person in the history of this series of tests to score a perfect 100% and it was determined that Ron uses 35% more of his brain than the average person whenever he memorizes!

Simple tricks like closing your eyes in the shower, and the next method that we're going to share with you, have helped Ron use more of his brain. With enough practice, you can start to get the same results.

THE BUSINESSMAN'S SECRET WEAPON

The same Ron White we discussed in the previous section also gives seminars, presenting to businesses on how to improve memory. He promises that his method will allow you to memorize over 200 names in a day. He often proves it, too, naming everyone he meets in the room.

As Ron says, when you triple your memory, you can triple your business. People react positively to being remembered. By building personal connections, you already have a leg up on your competition.

When someone approaches you, be sure to focus. Mentally ask yourself "what is their name" before they give it to you — that way, when you get

the answer you'll be more likely to remember it because it provides an answer your mind is already searching for.

Next, choose something distinctive about their appearance. Whether it be glasses, hair color or a freckle on their face.

Last, associate an object with the person's name. If you think of a seal every time you meet a woman named Sally, it will make things much easier for you. Combine Sally the seal with the image of Sally's glasses, and you won't forget her.

The key is that the brain remembers pictures better than it remembers words. By assigning each name a picture, and associating that picture with someone's face, you'll never forget their name again.

ANTIOXIDANTS IN ACTION

It may surprise you, but the same telomeres that may help heart health also appear to affect memory and cognitive function. Studies have shown that the shorter our telomeres are at a young age, the more likely it is that we will suffer dementia later in life. However, researches have also found that the length of our telomeres is related to our antioxidant defense system.

Dr. Thomas von Zlinicki at the Protestant Geriatric Center of Berlin has done extensive research into this topic. He has suggested that "a well-balanced, concerted front of antioxidants is required" to increase our telomere length. Although studies have not been conducted to prove its effectiveness, the association between telomere length and antioxidants warrants giving a diet rich in antioxidants a try."

Foods that are rich in antioxidants include grapes, blueberries, red berries, nuts, sweet potatoes, carrots, dark green veggies, beans and fish.

A special form of vitamin C also might help. As reported in Life Enhancement Magazine,

In Japan at the Hiroshima Prefectural University School of BioSciences, research was conducted to determine whether a more oxidation-resistant ascorbate compound could inhibit telomere shortening. Using ascorbate-2-O-phosphate (Asc2P) on human vascular endothelial cells, the researchers succeeded in retarding age-dependent telomere shortening to 52-62% of the norm. Cellular lifespan was extended, and cell enlargement — an indication of cellular senescence — was prevented.

Stocking up on antioxidants will boost your memory as well as help you look younger!

THE BRITISH BREAKFAST SECRET

Let's be honest — when you think London, you think tea time.

Turns out, there may be more to the British tea habit than we previously suspected.

As we already discussed, antioxidants could help to fight the effects of aging on our telomeres, improving cognitive abilities and memory as a result. Green tea is rich in antioxidants because it goes through minimal processing, and is made from unoxidized leaves.

Although green tea has long been applauded for health benefits, such as possible abilities to reduce stroke risk or fight prostate cancer, new information suggests that it also might help to boost working memory.

One study conducted by the Department of Psychiatry at the University of Basel set out to investigate whether or not green tea extract would have a positive impact on cognitive functioning. Their conclusions state that their "findings provide first evidence for the putative beneficial effect of green tea on cognitive functioning, in particular, on working memory processing at the neural system level by suggesting changes in short-term plasticity of parieto-frontal brain connections."

Adding green tea to your caffeine rotation might have more health benefits than you expected — including strengthening your memory.

35 CENT MEMORY BOOST

This next trick to boost your memory doesn't require a prescription to access. In fact, you can purchase it at a grocery store for about 35 cents a serving.

The secret? Coconut oil. Or, more specifically, the medium chain triglyceride (MCT) oil that comes from coconut oil.

Coconuts have long been valued for other medicinal purposes. Reportedly, British and Japanese soldiers would use coconut juice as supplementary IV's during WWII. It has proven to be great for rehydration. However, a newly discovered use could make coconuts even more valuable.

Dr. Mary Snyder turned to coconut oil when her husband Steve was diagnosed with early onset Alzheimer's. He was so far gone he couldn't remember the season, month or day of the week. To make matters worse, an MRI showed his hippocampus, the place his memories are stored, had begun to wither away.

Dr. Mary stumbled upon research connecting MCT oil to Alzheimer's treatments. Left without any other options, she decided to give it a try. She

started giving Steve a daily dose of seven spoonfuls of coconut oil each morning with his breakfast.

The results were shocking. It improved both memory and cognitive function for her husband. Within just a few months, he was able to mow the lawn, go for jogs and volunteer at the local hospital.

She's written a book on the treatment, called Awakening from Alzheimer's. Dr. Mary says that the number of people who have reached out to her describing similar results for their loved ones has been astounding.

Brains that have been affected by Alzheimer's display "Type 3 diabetes," which basically means that people develop insulin resistance in the brain, leading to a lack of glucose. When you lose access to glucose, you can no longer fuel your brain cells.

An alternative fuel for this insulin deficiency is ketone. Ketone is accessed easily through high fat, low carb diets.

Another way to get ketosis is MCT oil. When ingested, MCT gets converted to ketones in the liver. Ketones are released into circulation, and are eventually taken up by brain cells and converted into energy, just as glucose would be normally.

MCT oil is actually used in infant formula as well, since it mimics the fats found in breast milk. It is extracted directly from coconut oil and is available over the counter.

Coconut oil is 60% MCT. It sells for just 35 cents per serving at the grocery store. Although formal studies have not yet been completed, it has been shown to improve memory and cognitive function in personal cases.

You might be able to end senior moments for good by taking MCT oil as a daily supplement.

OXFORD MIND TRICK

Jonathan Hancock started using memory tricks when he was 16. He went on to break the Guinness world record for memorizing playing cards — twice — eventually memorizing 40 packs of cards total. He also used these tricks to succeed in school, receiving a first-class degree from Oxford University.

The secrets of his success are so simple that he now shares them with his fifth grade students.

In an interview with *The Guardian*, Hancock explains that the best memory techniques "use mental imagery to turn forgettable information into something that's much more likely to stick in your mind. You invent pictures to represent the things you want to know, funny, colourful, ener-

getic images that catch hold in your memory, then connect them together into scenes and stories that are intrinsically memorable."

Basically the more outlandish something is, the easier it will be to remember. So don't just repeat someone's name. Associate their name with a celebrity and picture that celebrity doing something unusual. Robert de Niro doing backflips is more memorable than Roger from down the hall.

Your memory only gets better with practice. Spend 15 minutes every morning trying to memorize something, while using these kinds of associations to assist you. You'll be surprised how quickly your memory improves.

Again, people who compete in memory contests (memory athletes, as they prefer to be called,) are adamant about the fact that they are not savants. Their memories are nothing special by nature. It is all about training your memory to be better — and that is something that we all can do.

The secret is simple: practice makes perfect. Josh Foer is a journalist who went on to win the U.S.A. Memory Championship in 2006, setting a record for memorizing a deck of cards in one minute and 40 seconds.

Foer explains that when he first started training for competitions, the tasks were simple yet very repetitive. "Each morning," Foer explains in a New York Times article, "after drinking coffee, but before reading the newspaper or showering or getting dressed, I sat at my desk for 10 to 15 minutes to work through a poem or memorize the names in an old yearbook."

Taking just 15 minutes out of your day to concentrate on memorization can have staggering results.

The trick is to take ordinary, boring facts like numbers, cards or names, and turn them into something interesting that our memories will be more likely to hold on to. As Foer explains, "if we see or hear something exceptionally base, dishonorable, extraordinary, great, unbelievable or laughable, that we are likely to remember for a long time."

If you'd like to hear Foer describe his techniques, take a look at this great video. He did a TED talk presentation titled "Feats of Memory Anyone Can Do." You can watch it online for free.

AVOID AMERICA'S BIGGEST DAILY BRAIN MISTAKE

Dr. Sanjay Gupta is a CNN news anchor and neurosurgeon. In 2013, he appeared on an episode of Dr. Oz to discuss what he believes to be the biggest threat to our brains.

As Dr. Oz explains, "the overload of modern life could present the

single biggest threat to the health of your brain."

The rise of smartphones, computers, the internet and the 24-hour news cycle have all left us overloaded. We haven't had the time to evaluate the long-term effects of all of this activity. The technology simply hasn't existed long enough for us to see the impact it has on our brains.

Dr. Gupta believes that this overstimulation can actually age our brains. The biggest problem? Multitasking.

The issue lies in people going back and forth between mediums. Although the brain can absorb a lot of information, you need to take the time to focus on one thing — one article, movie or conversation — in order to successfully create memories and store that knowledge away. Checking your cell phone and playing on an iPad while surfing channels on your television creates overstimulation.

His tip? Focus on one thing. Don't try to do it all at once. If you are studying 20 things at once, you won't remember any of it. By narrowing your focus to one topic, you can become an expert.

STOP BRAIN SHRINKAGE WITH THIS RELAXING PASTIME

Researchers at the University of Edinburgh have found that those who stay active as they grow older might be able to reduce the effects of aging on their brains. This includes the brain shrinkage that often leads to problems with memory and thinking.

Using MRI scans to measure the volume of brain tissue and the health of the brain's white matter in over 700 people (all over 70), the team found that even gentle exercise was better for brain health than other activities that are often recommended.

White matter is the wiring that transmits messages in the brain. The study found that people who were more active had fewer damaged areas to their white matter than those who did little exercise.

As reported in *ScienceDaily,* Dr Alan Gow of the University of Edinburgh's Centre for Cognitive Ageing and Cognitive Epidemiology (who led the research) said

Our results suggest that to maintain brain health, physical activity may be more beneficial than choosing more sedentary activities. We are excited by the next stages of this research as we seek to understand more about what might underlie the effect, but in the meantime, increasing physical activity — even a short walk each day — can only be encouraged.

"Brain teasers" like crossword puzzles, on the other hand, do little to help exercise your brain. People falsely believe that by doing a crossword puzzle or reading a book, they are giving their minds a workout. However, it is much better to remain active. The brain is a vascular organ after all, so anything that improves blood flow will help keep it strong and healthy along with the rest of your body.

Even if it's just a few hours in the garden, a walk around the block or a short jog, by remaining active you could be protecting your brain from age-related changes.

BUILD A SUPERCHARGED MEMORY IN TWO SESSIONS A WEEK

We now turn to our third U.S. Memory Champion.

As we've said before, "mental athletes" are not more intelligent than the rest of us. They are simply well-oiled machines who have trained their minds, and memories, to be more effective.

As a result, their tips and training methods are extremely valuable. They can be done by anyone.

Nelson Dellis has won the U.S. Memory Championship three times, all before turning 30 years old. He was personally motivated to improve his memory when his grandmother began to suffer from Alzheimer's disease. Determined to avoid the same fate, he began to research methods to improve his mind and memory.

West insists that anyone can accomplish the things that he has, as long as they practice. One of the tricks he recommends starting with is memorizing your grocery list.

By keeping track of the things you need at the store mentally, rather than relying on a list, you will force your mind to work a little harder at an otherwise ordinary task.

Your biweekly trips to the grocery store will suddenly become a mind workout, rather than just a chore.

THE DEADLY "ALZHEIMER'S TRIGGER" LURKING IN YOUR HOME

There's something that has become firmly ingrained in almost every American family.

It's been found to lead to strokes, heart attacks, high blood pressure, obesity, severe headaches, depression, anxiety and more.

Recent studies have even linked it to the development of dementia later in life.

Unfortunately, it's not easily removed. It's not a substance, like lead paint, or a dangerous item that can be kicked to the curb.

The silent killer in our homes comes from within: stress.

Stress can physically as well as mentally age you. One study observed mothers who were under extreme stress caring for a chronically ill child and compared their chromosomes to mothers caring for healthy children. Those women who were under intense stress showed accelerated aging of nine to 17 years.

That's not all. Caregivers looking after their elderly spouses have a death rate that is 63% higher than other people their age who are not faced with such a daunting task.

New studies done on mice have also found a correlation between stress and Alzheimer's. A PhD student at the Umea University in Sweden, Sara Bengtsson, found that mice who were under stress showed a loss in memory function. She also detected a higher amount of beta-amyloids in their brains.

Beta-amyloids are proteins that have been linked to Alzheimer's disease since 2007.

In light of these findings, it's more important than ever to make sure that you keep your stress levels down.

Try practicing yoga, or meditating for 20 minutes per day. Try to take your problems one day at a time, and make sure that you keep everything in perspective.

Relieving your stress should be a top priority when it comes to your health.

TRICK YOURSELF SMARTER WITH A SINGLE BEER

Picture this. You take a room of 40 men and divide the group in half.

You let half of them have a few beers — two pints each, to be exact. The other half remains sober (and probably upset that they were placed into this half of the experiment).

After the beer-drinkers are finished, you give all of the men a set of brain teasers.

Who do you think performs better — the slightly boozed, or the sober and focused?

Believe it or not, in a 2011 study published in Consciousness and Cognition reported that the group of men who consumed the beer solved up

to 40% more of the brain teasers than the group who didn't. And they solved them more quickly.

You see, alcohol (when consumed in moderation) has the ability to diminish our working memory capacity. While this doesn't sound good, it can essentially loosen up your brain and allow for more innovation. When your mind isn't so intensely focused on one task, it's better able to think creatively to solve the problem.

YOUR BRAIN IS SHRINKING! HERE'S HOW TO STOP IT

Every food you put into your body has a purpose. It might be something unhealthy you eat because you find it delicious. Or it might be something healthy that improves and strengthens a part of your body. You need to be aware you control everything that enters and affects your body.

For example, consuming certain **B vitamins** can boost your memory and, more importantly, slow down its natural decline. In one study, one test group received high dosages of the vitamin while another test group received a placebo. Those who received the placebo performed poorly in a number of memory and thinking tests compared to their counterparts.

For those suffering from Alzheimer's, increasing the amount of vitamin B in their daily diet could help mitigate harmful symptoms and retain lucidity. Specifically, look for vitamins B-12, B-6, and B-9 (also known as folate).

Perhaps the Most Powerful Health Secret of All

Harness Your Mind to Revitalize Your Body

One of the most famous cases of "mind over matter" in medicine belongs to a man known only as "Mr. Wright," whose incredible story was reported in a 1957 medical journal. For him, *"mind over cancer"* is more appropriate.

He was expected to die within two weeks, from cancerous tumors which had grown to the size of oranges. However, he discovered the hospital would be testing a new and promising treatment program, and the hope alone changed Mr. Wright. According to Dr. Philip West: "His enthusiasm knew no bounds, and as much as I tried to dissuade him, he begged so hard for this 'golden opportunity' that against my better judgment… I decided I would have to include him."

He joined the treatment group, and his massive tumors shrank "like snowballs on a hot stove."

Given only days to live, he beat impossible odds to recover completely in only 10 days… until two months later, when Mr. Wright discovered the truth about the drug: He was the only person to experience any benefit. Upon hearing the medication was a failure for every other patient, his tumors returned with a vengeance.

Dr. West, thinking fast, "decided to take the chance and play the quack." By now, he had an inkling Mr. Wright's mind had more to do with his recovery than the drug. So he gave Mr. Wright a completely new injection, which he swore was "a new super-refined, double-strength product." In reality? It was normal water.

Once more, Mr. Wright's tumors disappeared. Unfortunately, once again, he discovered the treatment was, in fact, a sham. In a life-or-death case of "Fool me once, shame on you. Fool me twice, shame on me," his cancer returned, and he died in two days.

Could these miraculous cures (and relapses) really have all come from Mr. Wright's mind?

I THINK I CAN, I THINK I CAN…

As early as 1800, scientists realized people possess a certain power to feel relief from their symptoms — and even eliminate objective evidence of disease, such as lesions or tumors — if they merely believe they've taken medicine for their condition.

The anomaly was dubbed the "placebo effect."

Just how powerful can the placebo effect be, and how much can it help you achieve your dreams, goals, and desires for fitness and robust health?

In Canada, in an effort to find out what factors were associated with lifespan, scientists surveyed 3,128 men and women over the age of 65 on their life satisfaction, income, and where they lived and collected data from their medical history.

And the winner? *Having the mindset of robust health.*

But does that mean anything? Maybe people who lived the longest simply knew they were healthy — in other words, their belief in their own health was an effect, rather than a cause.

Perhaps. But consider this: Two bizarre studies on knee surgery patients found those who received a "sham" surgery (as in, they were given anesthesia and got a couple small incisions from a surgeon… but no work was actually done on their knee) experienced similar improvements in knee

function and pain reduction over the following year compared against those who got a real surgery!

But that could still be argued as a case of "mind over matter" rather than "mind changing matter." After all, the patients reported feeling equally satisfied with their reduced pain and improved mobility, but that doesn't mean anyone's knee became objectively healthier.

YOU'RE *ALREADY* HEALTHY!

Which is what makes a Harvard study on the power of suggestion and health so exciting.

Hotel room attendants were divided into two groups. Researchers measured the blood pressures, weights, and waist circumferences of both groups and then measured these again eight weeks later.

The only difference between the groups was that one was given an educational lecture on how their work duties actually met the government's recommendations for exercise and that they should therefore be proud of already doing the activity necessary to achieve a healthy body.

Researchers then monitored all the participants' behavior over the next eight weeks to make sure their work habits remained the same, which they did.

The results? Compared with the first group, which did not receive the suggestion that their work habits counted as exercise, the second group experienced lower blood pressure, reduced weight, and a reduced waistline… all without any changes in their work routine, exercise habits, or diet! (It's worth noting, however, that a very similar study failed to replicate those astounding results.)

So what could have made the difference?

SURPRISING STUDIES

Let's investigate some other findings, to see if we can get a glimpse of the solution to this puzzle.

A 2006 study using electroshock (seriously) tested how patients responded to a placebo depending on its perceived price. Researchers found that patients who received the pricier placebo responded better than those who got the cheaper option. Perhaps your brain requires a good excuse to believe in results.

Another study, this one from 2008, measured how powerful the placebo effect was for patients suffering from irritable bowel syndrome, where one

group received warm attention from the practitioner, compared against standard care or none at all. The kicker is all of the patients received "sham" treatment disguised to be real — so only their interactions with the doctor were tested for healing power.

And the outcome: The volunteers reported more positive results when they were treated with more and better attention.

Just in case you're thinking this can work only if the patient is deceived, consider this. A small 2010 study compared one group of IBS-suffering patients who were given a sugar pill to another similarly afflicted group who received zero treatment other than coming in for evaluations.

As you can probably guess by now, the group that got the sugar pill felt better. But here's the twist: The participants were explicitly told during treatment that the pill was a placebo. Yet it still worked!

PUTTING IT ALL TOGETHER

How can we harness the knowledge gained from these studies to empower you?

Perhaps the answer can be found in how the Harvard researchers eloquently concluded their paper: "People have mindlessly overlooked what it means that placebos are inert. Ultimately, each individual is responsible for their effects. Recognizing this suggests that it is time for us all to explore more direct means of controlling our health, such as pursuing mindfulness… as a tool to actively and deliberately change our mindsets."

The most effective solution, then, may be the one you've already started: reading this newsletter. By immersing yourself in the most powerful and proven health strategies science has discovered, your education will crank up your *belief*.

Combine solid belief with effective habits and you might astound yourself with the leaps you make forward in health, fitness, and vitality.

Stress is Not Always a Bad Thing

The Little-Known Biological Response With Huge Implications

"*Was mich nicht umbringt, macht mich stärker,*" declared Friedrich Nietzsche in 1888. Or, on this side of the pond: "What doesn't kill me makes me stronger."

There's valuable health advice in that motto, but it's a bit overblown —

fitting, perhaps, for a guy who tended to sign his letters "the Crucified One."

Had Fred favored accuracy over hyperbole, he might have suggested, "What stresses me within certain boundaries ultimately makes me healthier."

That perfectly summarizes the basic premise of *hormesis*.

Hormesis is a little-known term with huge implications. It refers to a fascinating phenomenon: a favorable biological reaction to just-right application of chemical toxins, radiation or some other form of stress that can cause long-term harm, or even death, in higher doses.

It was first scientifically noted by German pharmacologist Hugo Schulz in 1887.

Shulz found that a disinfectant that in large doses killed yeast and in tiny doses had no effect at all had a surprising effect when administered in precise, moderate amounts.

It made them grow more numerous and robust than the untreated controls.

The mechanism of hormesis appears to be *overcompensation to re-establish homeostasis* — which is a technical way of saying that an organism, or group of them, responds to stresses that fall within a certain range of intensity by becoming stronger.

The hormetic response with which most of us are familiar comes from exercise. Lifting weights, for example, is a stress that subtly injures and weakens the body in the short term.

But the body responds to this insult by producing more antioxidants; repairing DNA; strengthening bone, muscle, and connective tissue; and generally slowing the aging process.

The result over the next few hours or days is a healthier, more resilient body.

It happens because your body is constantly trying to adapt. If you lift weights, your body essentially says to itself, "Survival in this place requires heavy lifting. More muscle is on the way!"

Hormesis may also help to explain the puzzle of "healthy drinking." Ethyl alcohol is indeed a toxin. It has a long, sad history of wreaking irreversible tissue damage and death at high doses. But at lower doses, it has been shown in plasma samples to boost antioxidant activity. This may help explain why many studies have found modest cardiovascular benefit from moderate consumption, such as one drink for women or two (thank God!) for men, daily.

The big picture is that hormesis explains why people who lead strenuous lives with lots of physical challenges wind up healthier and live longer than those in more comfortable circumstances.

This is not just conjecture. A pair of 2008 reports by Danish researchers examined how various types of "mild stress-induced stimulation" led to "biologically beneficial effects."

They found that radiation, food restriction, heat, high gravity and much more can boost health if delivered in the proper doses. Harnessing hormesis, they concluded, could lead to "new and effective approaches" in therapy leading to "prevention and treatment of diabetes, cataract, osteoporosis, dementia, and some cancers."

This means one of the best routes to health is to make yourself a little physically uncomfortable now and then. The most profitable discomforts are likely those with which human beings have a long evolutionary history: physical exertion; getting hungry; short-term exposure to cold or heat; and so on.

In other words, regularly get out of your comfort zone in any way that makes sense to you — jogging, weightlifting, even mountain climbing (mild hypoxia at high altitudes is probably good for lung function).

I'll have more to say about this in coming issues, but for now, remember that the path to a *starker* constitution is regular, modest stress.

A Modern Look at Meditation

You Don't Need to Believe in Mysticism to Reap the Benefits of this Ancient Practice

I'm a hardhead. I own it.

In the world of health, this means I have little patience for gooey, semi mystical explanations of the benefits of ancient health practices.

The dance-like movements of the martial art tai chi, for example, are said to be healthful because they gather "chi" — the Chinese concept of a universal life force — from the ether.

Right.

My take is that tai chi is a gentle form of exercise that provides a bit of stretching, mild cardio, and — since it is typically done outdoors in groups — some salutary socializing and solar exposure.

In other words, the modest benefits it conveys are due to observable factors, not magic.

My attitude toward meditation is similar.

While often regarded as a way to marinate — and ultimately dissolve — the sinful, conniving ego in loving, nebulous, divine goo, I see no reason to believe such an eventuality is 1) possible or 2) desirable.

Yet… I meditate at least four mornings each week and when I generally feel the need.

It is indeed possible to engage in this ancient practice for thoroughly modern reasons.

For inspiration on this point, I turn to my friend Susan Piver, a renowned author and meditation teacher and a bit of a hardhead herself.

When she teaches, Susan uses an analogy I find quite useful.

She points out that while regular physical exercise is obviously good for us, constant exercise obviously is not. Running, swimming, or lifting every waking moment for days, weeks, or months would not build muscle; it would lead to profound exhaustion, tissue breakdown, collapse, and, ultimately, premature death.

Every muscular, healthy athlete you've ever seen grew his or her enviable physique during rest periods between carefully spaced sessions of exercise.

This, says Susan, is just what meditation can offer our minds — a rest period in which our endlessly overworked cognition can relax and regenerate.

"The practice of self-healing meditation is just this: resting the mind in silence and space, allowing it time to recover and rejuvenate," she says.

This does not mean not thinking at all, just as resting between exercise sessions does not mean shutting down metabolism entirely, a state colloquially known as death.

Instead, it means no longer ceaselessly pushing our minds from one thought to another — but, rather, mentally standing apart from thoughts in a relaxed "observer's" perspective until they naturally begin to lose momentum.

Observing but no longer actively creating a rapid-fire stream of continuous thoughts is, I believe, roughly analogous to resting after an all-out sprint. Just as we feel the heart continue hammering quickly post-sprint, so it is that during mental rest we observe that our thought stream keeps burbling along.

But eventually, as we relax and watch our thoughts come and go, they begin to fade in frequency and intensity, just as during physical rest, the

heart returns to a sustainable rate at which it can regroup and grow stronger.

Within that restful space, renewal happens. When I re-engage with the world, my once-scattered attention obediently fastens upon any object or goal I choose.

I get things done, and more to the point, the doing seems effortless.

Bottom line: Ten minutes each morning engaged in gentle, casual "thought observation" can fit into anyone's schedule and is one of the most profoundly healing activities I know.

Release Yourself From Anxieties, Obsessions, and Phobias

A Scientific Approach to Overcoming Your Fears

One of the most common and successful approaches to treating anxiety, fear and obsessive-compulsive disorder (OCD) is the use of exposure therapy.

The essential element of treatment is progressive exposure to stronger stimuli until habituation or extinction occurs.

So if you have a fear of heights, snakes, or social situations, you should progressively — and very gradually — expose yourself to tougher situations. To counteract acrophobia, you could start by ascending very small elevations. Walk to a height that just begins to make you anxious and hold there for a while, but retreat before it becomes too uncomfortable.

If you fear snakes, start by looking at photographs of snakes, and then handle rubber snakes, or observe real snakes in tanks at zoos or pet stores. Eventually, work on handling real, but harmless, snakes for increasing amounts of time.

For social situations, start with small groups of friends and build from there.

A related version of this exposure therapy, called exposure and response prevention, has been found useful in treating OCD. The key is to recognize the obsessive thoughts or compulsive behaviors as "escape responses" or "safety behaviors" in response to stressful stimuli, while learning to prevent the escape response to progressively stronger stimuli.

It is especially important with exposure therapies that you stay in control of the situation at all times. There must always be an "exit hatch" that allows you to back down and escape or stop the stressful stimulus before real panic sets in.

Being forced by a therapist or third party to go beyond the edge of your

comfort zone can be extremely counterproductive and anxiety-inducing. The therapist, if any, should be at best a guide or coach. If you are strongly motivated to succeed, exposure therapy may be quite effective if you do it without a therapist.

An Insidious Drain on Your Health and Life Span

The High Cost of Watching Television

In an episode of *The Simpsons*, Police Chief Wiggum and his wife are watching television while resting in bed when the signal suddenly cuts out. An automated announcer reports, "Your cable TV is experiencing difficulties. Please do not panic. Resist the temptation to read or talk to loved ones. Do not attempt sexual relations, as years of TV radiation have left your genitals withered and useless."

Wiggum lifts the blankets to check and confirms, "Well, I'll be damned."

This short sketch isn't too far from reality.

I won't bore you with statistics associating television with obesity. You might already have an inkling that sitting on your duff for hours while eating chips may have something to do with gaining weight. So here are some more interesting figures:

A 2015 study out of the U.K. found that, among men and women aged 48–92, the more television they watched per day, the slower their average walking speed.

Here's why you should care: A 2011 study found walking speed was associated with longevity.

OK, one more: A University of Cambridge study found time spent watching TV was associated with all-cause mortality. There. Are we all in agreement that television sucks… the life out of you?

This issue is near and dear to my heart because I've flushed years down the toilet staring at the idiot box… and I'm not alone. There are all kinds of statistics showing the average American watches almost *five hours per day.*

That could add up to 16.2 *years* of your life!

I "woke up" when I asked myself, "Nate… if you took *all* the time that you spend watching television today… and dedicated that time to exercise, meditation, and working on your business instead… how much more progress would you make?"

The answer shook my world. So I told my cable company to cancel my service. As a result, I became more productive, happy, and fulfilled. I began writing more, and creative ideas flooded my brain. And my income went up.

So what's the best action plan for you?

Cancel your cable. Toss the television in the garbage. At the very least, get a DVR, so you can pick and choose what you want to watch when you want to watch it. Counterintuitively, this will actually reduce your TV time, because you'll find your standards going up. Plus, it's a friendly option in case you have a TV-loving spouse (say it's a gift for him or her!).

The Problem With All-Nighters

Here's Why Your Brain Can't Handle White Nights

"Pulling an all-nighter" is common among college students, but going sleepless from dusk to dawn to get things done is increasing among office workers and teachers as well.

The BBC reports that in 2012, 70 percent of 1,600 primary school teachers reported that in the three months prior to the survey, they had stayed awake all night to complete work on at least one occasion.

But we've got good evidence that this is a bad idea.

Two-thirds of students at St. Lawrence University in Canton, New York, put in at least one all-night session per semester. A study shows that those who did so regularly had lower average grades on their overall coursework than those who slept before their tests.

The reason for this can be challenging to tease out — it's possible, for example, that students who are prone to pull all-nighters are less organized and forward-thinking than others.

Or maybe they are just plain less intelligent.

But the more compelling (and ironic) reason all-night study sessions likely don't work is that they defeat the *very process of memorization*.

That's because memories are consolidated — in other words, stored in ways that make them easy to retrieve days or weeks later — during sleep.

Earlier this year, researchers at Brandeis University looked at specific neurons in fruit flies that are known to consolidate memory. When these neurons were active, the flies slept more, and when the neurons were de-activated, the flies were up and flying.

So it appears that memory-consolidating neurons are not just important

— they run the show. They actually inhibit wakefulness so they can start converting short-term to long-term memory.

So refusing to sleep is basically the same as refusing to memorize.

Bottom line: Don't stay up all night and expect to have more facts at the ready in the morning.

Add this information to recent research suggesting the brain cleans itself of accumulated toxic byproducts during sleep. Now you've got a couple of great reasons to stick to a schedule that lets you get plenty of shut-eye the night before the big day.

Marshmallows, Rat Sex, and Your Hippocampus

How to Succeed in a Tempting World

Almost half a century ago, 32 children were offered marshmallows in a Stanford University experiment. It all seemed innocent enough — until scientists checked on the participants decades later and discovered some shocking results.

Turns out that the kids who ate *more* marshmallows in the experiment were more successful later in life than those who ate fewer. They had higher SAT scores. They ended up being more slender. Even their brains had grown differently.

Now before you rush out to stock up on marshmallows, let's take a closer look at the study.

Scientists led children aged 4–6 individually into a room and offered them a single marshmallow. But there was a catch: The child was told that they could get a second marshmallow… but only if the young'un could wait 15 minutes alone without eating the first one.

Thus commenced the struggle. Some kids shielded their view of the tantalizing treat, kicked the desk it rested on in frustration, or tugged on their own pigtails to distract themselves. Others simply gave up and gobbled the treat.

But here's where things get interesting: When researchers followed up with the volunteers years later, they found that the children who delayed immediate gratification fared better as adults in career, health, and social realms.

So should you be disheartened by these results? Is strong — or weak — willpower something you're just born with?

MARSHMALLOWS... WITH A TWIST

Scientists at the University of Rochester theorized something else was at work in this study. And in 2012, they conducted a similar experiment — but with a cruel prelude:

Before the official "eat one now or two later" scenario was presented, each child was promised some art supplies and stickers by a researcher, who then exited the room to retrieve them. In some cases they'd return with the promised gifts, but in others they'd come back empty-handed, offering only a lame excuse.

Afterwards, the marshmallow experiment was performed on all the children. The result? The kids who had not received the art supplies and stickers were not nearly as motivated to delay their gratification. In fact, they were 400 percent less patient than the kids who got the gifts.

The scientists surmised that it came down to "beliefs about the stability of the world." If the children had reason to believe they'd receive their reward, they held out for it. But if they thought they were negotiating with an untrustworthy scientist, they believed delaying their gratification wouldn't matter — so they ate the marshmallow immediately.

How does this relate to you today? Think of the children's faith in the scientists as your own overall belief in your success.

Without a deep-seated belief that your temporary suffering will pay off, any amount of discipline will buckle under the weight of rationality. You'll hear that voice in your head say, "Just this one time," or "Ah, screw it, I'm hungry now."

THE POWER OF VISUALIZATION

But we can bolster our self-belief — and one particularly powerful way is through visualization.

When scientists coached children to imagine the outcome they wanted, they were able to resist the tantalizing first marshmallow longer. But this led to future success in life only when the children did it of their own accord. In other words, "hand holding" from the scientists helped only during the experiment.

Think of that like a variation on an old saying: "Give a child a visualization and they'll delay a marshmallow for a day. But the child who can come up with visualizations on their own can delay marshmallows for life."

How do you crank up your own imaginative power to visualize in general? The secret may be in a deep part of your brain called the hippocampus. It's

a region integral for creating memories, and new research is showing it lights up like a Christmas tree when we vividly imagine future events.

In a French study, men and women who chose an immediate small reward had less hippocampal brain activity versus those who went the delayed gratification route. Researchers concluded that visualization powered by the hippocampus "plays a critical role in providing the motivation to pursue goals that are not present to our senses."

So if you've been frustrated by various visualization techniques not working for you, an underperforming hippocampus may be why.

GROW YOUR BRAIN

The good news is science has found you can grow this part of your brain — and in a counterintuitive way: Get your feet moving. A 2013 study showed walking for just two hours per week for six months led to larger hippocampal volume. In case you think you're too old for a transformation like this, you should realize the participants, all women, were aged 70–80. (And sure, six months is a while… but we're talking about growing your brain here!)

Want faster results? Then perhaps you should have sex. A Princeton University rat study found male rodents that had sex with females grew new hippocampus cells within two hours. Of course, the results may not translate to humans (or women)… You'll have to test it out yourself!

Another rat study showed cannabinoids found in marijuana also stimulate hippocampal growth. If weed isn't your bag, no worries. Consider supplementing with lithium instead. This "forgotten" trace element may benefit your brain in a similar way, yet it's actually filtered out of our drinking water. Start with 5 mg of lithium orotate daily and see how you feel.

Whatever you do, remember this about achieving goals: It's not all about willpower. Your environment, your beliefs, a creative use of your imagination to visualize alternatives — all can be harnessed to enable you to succeed.

This lends credence to something French psychologist Émile Coué said about a century ago: "When the imagination and willpower are in conflict, are antagonistic, it is always the imagination which wins, without any exception."

So the good news is although not always easy, you do have control over your imagination. Which means you can win, no matter what temptations, marshmallow or otherwise, come your way.

Stop Doing This Now

Beat Procrastination With the Most Effective Time-Management System Known

There is a simple change you can implement today that will help you stop procrastinating. It won't cure it, but I think it will help. It's called the Premack principle, named after David Premack, a behavioral psychologist who has studied the reinforcement of behavior. Here is what his principle says:

> *A high-probability behavior can serve as reinforcement for a low-probability behavior.*

What that means in plain English is that something you really like doing (playing games, relaxing with a drink or good book, calling a friend) can make it easier to do an unpleasant activity — *if* you put the pleasant activity after the unpleasant one.

What David Premack understood is that pleasant tasks are reinforcing tasks. And so when we put reinforcing tasks after something, we get more of that something. Ergo, put the pleasant tasks last in the sequence! Sometimes this is called Grandma's rule, because your grandmother told you to eat your spinach first and then you can have your dessert.

The Premack principle also provides us with the most effective time-management system known. Make a list of the things you have to do. Rank them from the thing you most like to do to the thing that you least like to do and then *start at the bottom.*

If you start at the bottom — with the thing you least like to do — a curious thing happens. As you move up the list and complete more items, the tasks become more reinforcing. If you are like most people, you will be inclined to start at the top, but look what happens then: When you complete the first task, the next one is less desirable. The further you go, the more punishing the tasks become. Is it any wonder that people who start at the bottom get two or three times more done than those who start at the top?

I think this method is sheer genius, and it has helped me fight procrastination. One specific change I've made is to no longer start my day by checking email. I find reading email very "reinforcing," so I do it twice a day now: right before noon and again at the end of the day.

A surprising side effect of using the Premack principle is that unpleasant

activities eventually become more tolerable or even pleasant! This follows from the principle of reinforcement. I didn't believe it at first, but it has been validated by my experience.

[Note: Todd Becker is one of the pre-eminent health thinkers in the world today. His erudition is so deep and broad, however, that his articles are invariably long. I've excerpted this one but urge you to visit his blog, Getting Stronger, to absorb the scientifically validated things he has to say about harnessing stress to become more physically and psychologically powerful.**]**

Nietzsche's Creativity Secret

The philosopher Friedrich Nietzsche, who brought us "that which does not kill us makes us stronger," became one of the most brilliant German writers in history. And in another quote of his, he might have revealed how:

"All truly great thoughts are conceived while walking."

The time-honored act of putting one foot in front of another does far more than get you from Point A to Point B (though it does that as well).

Stanford researchers recently found that walking boosts "creative output." Specifically, they compared the creativity of people while they walked, as opposed to while they sat.

Output in the former group jumped 60 percent.

"Many people anecdotally claim they do their best thinking when walking. We finally may be taking a step, or two, toward discovering why," the researchers wrote.

Their work was published in the March 4, 2014, issue of *Journal of Experimental Psychology: Learning, Memory, and Cognition*.

Specifically, the researchers studied responses to something called the Guilford's alternative uses (GAU) test.

In this test, participants are given four minutes to generate alternative uses for common objects such as a button or car tire. Alternative uses for a button, for example, might be a doorknob for a dollhouse, and a car tire could be a child's swing or a planter.

A group of 48 students was divided into walkers and sitters. The walkers — while walking — performed dramatically better on the GAU, generating an average of 10 responses, versus just six for the sitters.

Bottom line: As the researchers put it, "Walking is an easy-to-implement strategy to increase appropriate novel idea generation." Although,

when someone asks for your creativity secret, you might want to borrow another Nietzsche gem: "There is more wisdom in your body than in your deepest philosophy." Then challenge them to a long walk!

A Standing Order for Your Brain

I'm known as the "health hack" guy — the dude with a big repertoire of simple, easy ways to improve physical and mental health.

To be honest, I'm not entirely thrilled with this title. The fact is, health can't always be "hacked" — that is, boosted with cheap, quick, easy shortcuts. Sometimes, the health seeker must marshall true discipline; digging deep to work out harder, or eat better, or otherwise resist powerful urges that push us toward bloat, sloth, and general dissipation.

However…

I'm about to reveal a true "mood hack" — one so insanely quick and easy that there is no reason every person reading this can't begin doing it right now and reap immediate benefit.

Here it is: Stand or sit straight up and smile.

Yes, it's that easy.

HERE'S THE SCIENCE

Most of us tend to think that *feeling comes first, body position second.* So we imagine that we slump or frown only in response to certain feelings.

But a great deal of research indicates that feeling and body position are actually a two-way street — or, more precisely, a feedback loop.

For example, in a January 2015 study by New Zealand researchers, 74 participants were randomly assigned to sit in a slumped or upright position.

Their backs were then strapped with special tape that essentially "froze" them in these postures for the length of the study.

Researchers led people in both groups through a variety of tasks — reading, public speaking — and assessed their mood, self-esteem, and feelings of safety. They also monitored the subjects' blood pressure and heart rate.

Results were unequivocal: "Upright participants reported higher self-esteem, more arousal, better mood, and lower fear compared to slumped participants," the researchers concluded.

Similar results have been found for standing up straight and smiling. Each of these "happy" positions has been shown to boost feelings of happiness, confidence, and safety.

As psychology professor Richard Petty of Ohio State University told *Fast Company* magazine, "The brain has an area that reflects confidence, but once that area is triggered, it doesn't matter exactly how it's triggered. It can be difficult to distinguish real confidence from confidence that comes from just standing up straight… these things go both ways just like happiness leads to smiling but also smiling leads to happiness."

MAKING IT WORK FOR YOU

A vague admonition to "Sit or stand straight and smile" doesn't help much — nobody can, or should, do these continuously.

So based on research, here's what to do.

Research by social psychologist Amy Cuddy revealed that a *mere two minutes* of standing straight rather than slouching was enough to create positive moods.

Cuddy endorses a standing posture she calls the "power pose" that virtually anyone can do, consisting of hands on hips, spine erect, legs slightly apart.

Power posing and smiling? An amazing combination.

Since I saw Cuddy's famed TED speech on the subject in 2012, I've used this almost daily. It is especially useful if you face a situation that strikes you as stressful. Before a speech or making a difficult request of a family member or friend, assume the "power pose" for just two minutes.

You'll be amazed at the difference it makes.

Science Reveals the Secret to Happiness

Want to Be Happier? Here's the One Thing That Matters Most

I've spent years researching happiness. I've spoken with many of the leaders of the positive psychology movement — a discipline that uses science to maximize "subjective well-being."

I've talked with endocrinologists, who are experts on the hormonal basis of moods. I've chatted with sleep experts, exercise mavens, meditation authorities, you name it.

It's all fascinating, because while one might feel that happiness is the realm of poets and philosophers, science really can reveal some quite specific answers to the ancient human question "How can I be happier?"

Pursuing this question scientifically is important, because we are incredibly bad at predicting what might make us happy — and consequently,

often waste our lives pursuing the wrong things.

For example, many people spend a good chunk of their lives working, and when they are not working, they are making plans to work in a new or better way. The motivating factor here is money.

We imagine that having more money will make us happier. In fact, we take this as a given. "More money equals more happiness" could be called the equation that propels America.

But it's not true.

WHAT THE SCIENCE SAYS

The seminal paper exploring this phenomenon was published in June 2006 in the prestigious journal *Science*.

Titled "Would You Be Happier if You Were Richer?" the paper, written by a team of notable researchers — including Daniel Kahneman, winner of the 2002 Nobel Prize in Economics — concludes:

The belief that high income is associated with good mood is widespread but mostly illusory. People with above-average income are relatively satisfied with their lives but are barely happier than others in moment-to-moment experience.

Why?

The answer, said the research team, is what they called "the focusing illusion."

Briefly, the focusing illusion is the misconception that arises when social scientists ask people questions about some specific part of their lives — for example, how much money they make — and then ask them how happy they are.

By focusing the respondents' attention on money and then asking them about their level of happiness, survey takers tend to tie the two together — even if in day-to-day life, almost nobody actually focuses on the connection between their incomes and their happiness.

The result is that almost everything that's written about income and happiness is skewed by the fact that researchers' questions create a "focusing illusion" that suggests high income equals happiness — even if that's not the everyday experience.

It turns out that what really makes people happy is not more income. This is because the time spent to earn the extra income is often devoted to activities that don't raise happiness, such as extra hours in the office or

commuting. As the researchers put it:

As income rises, people's time use does not appear to shift toward activities that are associated with improved [happiness].

SO WHAT REALLY MAKES US HAPPY?

So — if you ask the question carefully, isolating it from the treacheries of the focusing illusion — what *really* makes people happy?

As it turns out, having people list "the best moment of the day" for several days is an incisive way to get a good, useful, scientific answer to the source of human happiness because it doesn't "lead the witness" via the focusing illusion.

When the question is asked this way, the answer is unequivocal.

The researchers found that "time spent socializing" is consistently ranked as among "the best moments of the day."

To be even more specific, more than any other single activity, overall happiness ties most closely with the number of meals eaten with friends and family.

So if you want to be happy — and who doesn't? — your path is clear.

If the choice is between working longer hours and a more distant commute, or shorter hours and more chances to break bread with friends, the latter choice is — hands down — the one to take.

You Don't Need More Sleep... You Need More of This

My Talk With America's Sleep Expert on Sleep, Dreams, and How to Optimize Both for a Better Life

Rubin Naiman, Ph.D. is an internationally recognized leader in sleep and dream health. He is the sleep specialist and clinical assistant professor of medicine at the world-renowned University of Arizona Center for Integrative Medicine directed by Dr. Andrew Weil and the author of a number of books on sleep including *Healing Night: The Science and Spirit of Sleeping, Dreaming, and Awakening.*

He brings both a scientist's and an artist's perspective to his research. In my experience, no one has a more comprehensive view of sleep, dreams, and how to optimize both for a better life.

Natural Health Response: Many people tell me they are exhausted every day because they just aren't sleeping well. What's your advice to people who say that?

Rubin Naiman: I think in many cases the problem isn't a lack of sleep. It's a lack of dreaming.

NHR: Can you expand on that?

Rubin: Think of digestion. There's what might be termed an intelligence that goes on around digestion. We send all kinds of stuff we consume down there, and the GI system has to chew on it, break it down, and digest it. Most importantly, it has to "decide" what it's going to assimilate and what it's going to eliminate.

Likewise, if you think about experience in waking life, you're exposed to so much. Feelings, thoughts, objective and subjective experiences, all kinds of sensory information pouring in. All that information essentially gets digested and assimilated when we dream.

The dreaming mind has to make very intelligent decisions. It has to decide, of everything we've been exposed to that's been tumbling around in short-term memory, what of that is going to get transferred into long-term memory. Meaning what will become incorporated into who we are.

In the same way much of the food we consume literally becomes us physically, what we consume during the day in terms of experiences can become a part of who we are psychologically, if it is well digested.

NHR: Pursuing that analogy, people are consuming so much more information now than they ever have before, right?

Rubin: Yes.

NHR: So the digesting process becomes even more important.

Rubin: I think so, and I think there's another parallel with the food we consume. There's so much consumption of junk food these days, and it's easy to make the argument that we consume a lot of junk information.

NHR: They call it data smog. It's just vast piles of irrelevant, dodgy, or sensationalist information. Every content provider is trying to rise above the fray on the Internet, so they say weird, scary things that are tapping into ancient drives — this looks so scary, this looks sexy, whatever. You're saying it's more important than ever for the brain to figure out what to keep and what to excrete from this excessive volume, and that's what dreaming does.

Rubin: Yes. We over consume food, we over consume energy, we over-consume light, we over consume information.

NHR: I've heard it called the dopamine drip. Dopamine is the hormone that gives us a little shot of pleasure when we see something interesting. But pretty soon, you need it to feel normal, like any other addictive opiate. That's

why people spend hours on the Internet and can't seem to stop. I appreciate your insight that really enhancing and embracing our dream life could help.

Rubin: We've blocked out the dream, both at night and during the day. I personally think that's one of the reasons there's so much interest in mood altering, with alcohol, with drugs, with medications, and with experiences. There's a hunger for that expansive consciousness that normally occurs in a dream, and we segregate the dream, we confine it to night consciousness. We don't allow ourselves to bridge to it during the day. It segregates a part of ourselves. It segregates the artist or the poet or the romantic…the larger part of who we are.

NHR: So how can we dream better?

Rubin: First, if we want to dream well, we need to sleep well. Just as the body prioritizes fluids over food if we're dehydrated, the brain prioritizes sleep over dreams. Once it sleeps well, it will turn to dreaming.

One practical route is to take melatonin. It's the easiest and the safest way to promote dreaming. You can take a time-released dose, or take a small dose when you happen to get up in the middle of the night. That helps you to stay asleep and experience the active dreaming that happens just before morning.

The other thing I'd recommend is simply to pay attention to your dreams. **[Editor's note:** For more practical sleep aids, see Dr. Naiman's "Beat Insomnia Once and For All" article on Page 124.**]**

NHR: What about people who claim to be unable to remember dreams?

Rubin: It's a skill that anyone can develop with some techniques and practice. First, wake up slowly. Don't catapult yourself out of sleep. Then, resume the last position you were asleep in. What we call "grogginess" is actually a beautiful hybrid state of consciousness that's part dreaming and part waking. Rather than dismissing that and shaking it off, revel in it for a few minutes. Write down or make a voice recording of your dreams. Then talk about it with your partner or friends.

NHR: Should you try to analyze it?

Rubin: Analysis is interesting, but it's secondary. More important than knowing the meaning of the dream is just knowing that dreaming itself is meaningful.

NHR: How does embracing dreaming improve physical as well as mental health?

Rubin: There's a theory dating back to the 1920s that says cancer is directly related to the loss of dreams.

NHR: What is the evidence?

Rubin: Well, for example, megadoses of melatonin, which promotes REM sleep, are now used in the treatment of certain cancers. It suggests that dreaming may have therapeutic value against cancer.

NHR: So people think melatonin is useful against cancer because of some odd biochemical quirk, but you're saying that its value may simply be that it re-establishes vivid dreaming?

Rubin: Yes, I think that's certainly a possible reason that it works.

THE TIBETAN SHAMAN'S SECRET TO FALLING ASLEEP QUICKLY

Now here's an ancient secret — from Tibetan shamans — to help you fall asleep after your head first hits the pillow.

If you struggle to fall asleep because of racing, worried thoughts, try this. As a bonus, it helps enhance your power to remember your dreams. Another potential bonus, according to the shamans: It'll help you achieve spiritual immortality.

So let's dive into achieving this fine health trifecta.

As you lie in bed, think about what you were doing just 10 minutes before. It might have been brushing your teeth. Then think of what you were doing an hour before — perhaps taking a shower or doing some reading. Then think about the activity before that… and before that.

Continue rewinding your entire day, until you get back to when you first woke up in bed.

A couple keys to making this work: Don't worry about recalling specific times. It's more about the events of the day. Also, do not make this a time to judge or ruminate on the day. Simply remember what happened. As they might say on Dragnet: "Just the facts."

By practicing this simple secret, you're wiping your mental slate clean and enhancing your calm. Most worried thoughts are future-oriented, and with this exercise, you're disengaging from this mental trap. You're also exercising your memory muscle — don't be surprised if you start recalling your dreams more frequently.

Does it work? Less than 24 hours ago, I used this secret as the final nudge to get me to sleep. And yes, I remember a good deal of my dreams from this morning.

Use this Tibetan secret and it might do the same for you.

Steps to a Better Night's Sleep

Improve Your Health by Resting Easy

Do you get enough sleep?

Probably not.

The average American logs a mere 6.8 hours a night, according to Gallup:

Usually, How Many Hours Sleep Do You Get At Night?

	1942	1990	2001	2004	2013
	%	%	%	%	%
Five hours or less	3	14	16	14	14
Six hours	8	28	27	26	26
Seven hours	25	30	28	28	25
Eight hours	45	22	24	25	29
Nine hours or more	14	5	4	6	5
NET: Six hours or less	11	42	43	40	40
NET: Seven hours or more	84	57	56	59	29
Average hours per night	7.9	6.7	6.7	6.8	6.8

At age 59, my health is excellent, and the reasons are numerous. Genetic luck matters (and I don't pretend it doesn't!), but I am disciplined about my high-fat, moderate-protein, low-carb diet, and I exercise for a solid hour daily.

Still, I firmly believe that another major reason I am thriving in middle age is that I insist on getting enough sleep. I virtually always log eight hours in bed, and after a particularly physical day, I'll turn in a solid nine.

Is this easy? No. Each day, there are demands — and temptations — that would make it useful to stay up later or get up earlier. Being disciplined about bedtime, however, yields abundant rewards.

So let me emphasize: The first, most important, and most difficult step toward getting sufficient sleep is committing to carving out the necessary hours. Be as hard-nosed and vigilant about your sleep as you would any other vital commitment.

Beyond that:

- **Get active.** People who are physically active during the day sleep better than those who are sedentary. Don't engage in vigorous exercise too close to bedtime, as this can make it more difficult to fall asleep

- **Go outside** each day to get exposure to bright, natural light. Daily solar exposure of an hour or so, preferably between 10 a.m. and 3 p.m. when the rays are strongest, boosts vitamin D synthesis

- **Wind down evening light exposure.** Homo sapiens have been around for roughly 200,000 years; the electric light, about a century. This means that the hormonal changes that bring on sleep are easily disrupted by the "false suns" that blaze around us for hours each evening. A wonderful practice is lighting candles to dimly — but romantically! — illuminate the house for the last couple of hours before bed

- **Limit late-night computer and television viewing.** A computer or TV screen may seem much dimmer than a light bulb, but these screens often fill your field of vision, mimicking the effects of a room filled with light. Dim screens such as those on e-book readers — or the paper pages of a physical book — are better choices for evening viewing. You can also download a free program, f.lux, that automatically dims computer screens in the evening

- **Banish artificial ambient light sources from your bedroom,** including glowing digital clocks and night lights. If you need some light, try a red night light (such as a red Christmas tree bulb in a night light fixture). Some studies indicate that red light does not suppress melatonin production — which may make it easier to go back to sleep.

- **The best natural sleep aid is valerian.** This sedative herb has been used safely in Europe for centuries. Buy standardized extracts at your natural food stores. Take according to package directions half an hour before bedtime.

Bottom line: Sleep is absolutely vital to good health but is held in low esteem in this hurry-up culture. Prioritize it.

The Real Secret of Successful Sleep

It May Involve Redefining "Success"

Ever feel like a failure at sleeping? I certainly have.

We both know how it goes.

Hit the sack at 11. Set the iPhone for 7. Eyes closed.

Then, in myriad ways, our plans to log a solid eight hours begins, as the Scots would say, *gang agley.*

Some nights, we can't fall asleep. Others, we're up from midnight–3:00. Still others, we're up at 5:00 and, though far from refreshed, just can't get back to dreamland.

The following day requires copious coffee, carbs, and concerted effort just to stay awake as the boss tells the staff, once again, that the company must remain "110 percent committed" to excellence, or authenticity, or some damn thing.

Part of our trouble is due to the usual slumber-robbing suspects: too much caffeine and stress, too little exercise and daily solar exposure. Lifestyle, food, and supplement choices can help with all of these, and I am an enthusiastic supporter of all three.

But it's important to note that part of the problem is *built into* the idea that eight continuous nighttime hours is the optimal way for human beings to sleep.

Sleep scientists call this pattern *consolidated* sleep. As a social and personal ideal, it's only about 200 years old. It's largely the result of the gas, then electric, light's ability to tack hours of brilliant, sun-simulating illumination onto the end of each day.

Since the productive "day" is now 16 hours long, the only way to log eight hours of sleep has become squeezing them into one block.

But there are other, potentially better ways to sleep.

Historian A. Roger Ekirch spent 16 years digging up over 500 preindustrial sleep-pattern references dating back to ancient Greece. In his fascinating book *At Day's Close: Night in Times Past,* he makes a convincing case that segmented sleep used to be the norm in Western Europe and possibly the world.

Most typically, people had two distinct sleep periods, called first and second sleep, divided by one–three hours of wakefulness shortly after midnight.

During this interlude, sometimes called "the watch," people talked, smoked, prayed, even chatted with neighbors or rounded up stray herds.

Thomas Jefferson particularly enjoyed writing during the silent, distraction-free hours of the watch. Ben Franklin took "cold air baths" while reading naked in a chair.

A further diversion popular during the watch was as old as sleep itself. Sixteenth-century French physician Laurent Joubert concluded that sex during the watch "enabled plowmen, artisans, and other laborers to beget numerous children," because the refreshment these exhausted folks felt after the first sleep allowed them to have "more enjoyment" and "do it better."

This means, as Ekirch explained to *The New York Times*, that what's labeled a sleep disorder these days "may simply be this traditional pattern, this normal pattern, reasserting itself. It's the seamless sleep that we aspire to that's the anomaly, the creation of the modern world."

In fact, it does not appear to be difficult to engineer an environment that awakens, so to speak, this ancient rhythm. A National Institute of Mental Health study notes that "human subjects, deprived of artificial light at night over a span of several weeks, eventually exhibited a pattern of broken slumber — one practically identical to that of preindustrial households."

So…

I used to play out the modern, common scenario — wake at 3 a.m. and try, desperately, to get back to sleep immediately, knowing that failure meant another zombified day ahead.

But trying urgently to sleep never works. Sleep is like a cat — it comes when it will, and chasing after it ensures it will return even later than usual, probably with a bad temper.

Since I learned about two-segment sleep several years ago, the solution I've found is twofold:

- The hard part: Go to bed earlier. Many Americans are actually ashamed to turn in early, as it suggests being unproductive, boring, and/or old. It also takes discipline, as electrification has packed the night with glowing, entrancing entertainments. But turning in at 9 p.m. gives you 10 hours until 7 a.m. — eight hours for sleep and two for the nightly watch

- The easy part: Enjoy being awake at night. During the watch, I calmly turn to small, quiet occupations such as reading, writing, making story idea lists (this idea came from last night's list), and generally just enjoying the peace and quiet.

Even embracing this pattern, I don't always sleep perfectly. No one does. In fact, I doubt any such Platonic ideal as perfect sleep exists. I will say that I sleep more than I did before and feel more rested during the day. (I also credit a sleep supplement that features L-theanine, which reduced my waking from three or more times nightly to just once.)

For this new view of sleep, I thank historical investigators such as Roger Ekirch, who set out in his book to defy the dictum that history is "only the history of waking men." Sleeping men and women have fascinating stories to tell as well.

The Unusual Solution to a Better Night's Sleep

Putting a Stop to the Artificial Lighting and Electronics Which are Disrupting Your Body's Sleep-Wake Cycle

Sleep is highly underrated.

It is one of the "pillars" of optimal health and just as important as diet and exercise.

Poor sleep is linked to heart disease, Type 2 diabetes, and depression. It is also one of the strongest risk factors for obesity.

The problem is that humans are sleeping much less than they did in the past.

"Our electronics emit light of a blue wavelength, which tricks our brains into thinking that it is daytime."

It turns out that perhaps the single biggest contributor to our collective sleep problems is the use of artificial lighting and electronics at night.

These devices emit light of a blue wavelength, which tricks our brains into thinking that it is daytime.

Numerous studies suggest that blue light in the evening disrupts the brain's natural sleep-wake cycles, which are crucial for optimal function of the body.

Fortunately, this problem has some simple solutions.

BLUE-BLOCKING GLASSES TO THE RESCUE

The easiest and most effective way to avoid blue light in the evening is to use amber-colored glasses.

These glasses effectively block all blue light, so your brain doesn't get the signal that it is supposed to stay awake.

Studies show that when people use blue-blocking glasses, even in a lit

room or using an electronic device, they produce just as much melatonin as if it were dark.

If you don't want to use these glasses every night, then there are a few other ways to reduce blue light exposure in the evening.

One popular way is to install a program called f.lux on your computer.

This program automatically adjusts the color and brightness of your screen based on your time zone. When it is dark outside, the program effectively blocks all blue light from your computer and gives the screen a faint orange color.

IT REALLY WORKS!

About a week ago, I purchased blue-blocking glasses from Uvex that can help block blue light.

Amazon sells them for $10.10 and they're available for purchase.

I've personally tried a lot of different things in order to sleep better… but using blue-blocking glasses is by far the most effective sleep "hack" I have tried.

Beat Insomnia Once and For All

Seven Strategies for Serene Shut-Eye

Here is the advice that I print and hand to my insomnia patients. Clearly, one can't do all of these — I suggest looking over the list and experimenting with the practices that resonate with you.

1. Ritualize the Rhythms of Activity and Rest

- Create an energizing ritual with morning light exposure and exercise
- Learn to rest during the day with meditation and breathing practices
- Consider regular 20-minute midday naps (only if you sleep well at night)
- Develop a sweet and soothing evening ritual as a bridge to sleep.

2. Use Dusk and Darkness as Sleep Medicine

- Simulate dusk: Dim your lights for a couple of hours before bed
- Always use blue light reduction technology to watch TV or use computers [Recommendation: For TV, search Amazon for "blue light blocking" eyeglasses and screen filters. For computers, download free f.lux software from justgetflux.com.]

- Slow down with a warm bath, journaling, rest practices, yoga, and intimacy
- Consider melatonin replacement therapy as needed and sleep in total darkness.

3. Quiet Your Body Noise

- Avoid "counterfeit energies" — caffeine, sugary foods, and adrenalin
- Carefully check for possible sleep side effects of all medications used
- Check your alcohol intake — drinking less, earlier, and with food is best
- A bedtime snack of complex carbohydrates may be helpful.

4. Create a Sleep Sanctuary

- Keep your bedroom cool (68 degrees or less), dark and quiet during sleep
- Gradually move toward a more "green" — organic and natural — bedroom
- Get electric clocks and other such devices away from your head and bed
- Do all you can to feel psychologically safe in your bedroom.

5. Learn to Surrender to Sleep

- Avoid the chemical knockout of sleeping pills and alcohol
- You cannot literally "go to sleep" — practice "letting go of wakefulness"
- Approach getting to sleep as a personal spiritual practice — an act of faith
- Consider using natural sleep aids such as lavender and valerian if needed.

6. Don't Battle Nighttime Wakefulness

- Go to bed only when you feel sleepy
- Never watch the clock from bed — it pulls us back into the waking world
- If you can't sleep, get up and sit in a comfortable spot until you're sleepy again

- Use nighttime wakefulness as an opportunity to meditate or pray.

7. Arise Mindfully With Intention in the Morning

- Routine dependence on an alarm means you're not getting enough sleep
- Awaken slowly and explore your grogginess in the morning
- Let the memories of your dreams come and note them
- Set conscious intentions to guide your waking day.
- Finally, for those seeking an ingestible alternative to pharmaceuticals, I recommend:
- Melatonin: 0.3–0.5 mg [also listed as 300–500 mcg] 10–20 minutes before bed, preferably sublingually and sustained release
- Valerian: 300–900 mg standardized extract of 0.8% valerenic acid, or as a tea of 2–3 grams of dried root steeped for 10–15 minutes. Take 30–120 minutes before bed for two–four weeks to determine effectiveness
- Hops: In a 5:1 ethanolic extract, 1/2–1 dropper full, 30–60 minutes before bed.

Renew Yourself Physically With This Mental Habit

On the Amazing Healing Power of Forgiveness

The Internet is stuffed to its digital rafters with quick, simple "memes" describing mental habits that will make your life perfect in 22 words or less.

- "Just love"
- "See the beauty in everything"
- "Take time for yourself"
- "Do you run from the fire or reach for the stars?" (Got that one on Facebook today.)

Very compelling. Very seductive.

But it's also very unrealistic to think that we could adopt them all.

So allow me to focus on just one mental habit — just one — that science shows will pay more dividends than any other.

It is forgiveness.

When I worked with Dr. Andrew Weil on the book *Spontaneous Happiness*, I was amazed to find a huge bank of solid research on the amazing healing power of practicing forgiveness. It's not woo-woo stuff. If these benefits were to show up in drug research, it would spawn a billion-dollar product.

A DEFINITION...

The research I dug into used this definition, or one quite similar: Forgiveness is the act of voluntarily letting go of resentment toward someone or something that you believe has harmed you.

As it turns out, giving up the "weight" of carrying resentment can actually renew you physically. A 2014 study published in *Social Psychological & Personality Science* involved students at the Erasmus University Rotterdam School of Management in the Netherlands in a pair of provocative experiments.

In the first, half the students wrote about a time they had forgiven someone; the other half wrote about a time they refused to forgive a transgressor. Later, when the students were taken to a local hill, the forgiveness writers estimated the hill to be less steep than did the students who wrote about withholding forgiveness.

In the second, students were split into three groups. Group A wrote about a time they had forgiven someone, Group B about a time they had withheld forgiveness, and Group C about a neutral interaction that didn't involve any need to forgive. Then they were asked to jump as high as possible.

You guessed it — the "forgivers" jumped highest — a little higher than the "neutral experience" writers. The "non forgivers" jumped considerably less high.

Failing to forgive appears to be more than a metaphorical weight — it's a physical one as well.

SO HOW DO YOU DO IT?

Forgiveness is unique to each person. But as a basic outline, try the REACH strategy from researcher Everett Worthington, a psychology professor at Virginia Commonwealth University:

- "**R**ecall" the incident, including all the hurt
- "**E**mpathize" with the person who wronged you

- "**A**ltruistically" give them the gift of forgiveness (it can help to recall a time when you yourself were forgiven)
- "**C**ommit" to forgive publicly by telling the person you forgive them
- "**H**old" onto your forgiveness, even when feelings of anger surface. Remind yourself that you have already granted forgiveness.

Clearly, especially if the transgression was a large one, carrying out these steps can be easier said than done. But few mental acts can bring you more mental — and physical! — healing than this. It is well worth the effort.

What Surfers Can Teach Us About Meditation

It's Not About Sitting Silently, There Are Many Ways to Meditate

Meditation has been shown to provide remarkable benefits to those who manage to stick with it. But if we simply don't enjoy meditation or can't make it work, what options do we have? How can we get some of those attractive effects of meditation without actually sitting in a room for 30 minutes a day, every day? Here are seven alternatives:

1. NONJUDGMENTAL AWARENESS

From the moment most of us wake up, we're making split-second judgments about everything and everyone we encounter. That guy across the street who didn't pick up after his dog? What a jerk. All those cars lined up along the on ramp? Great. Now I'm going to be late. Even our thoughts and feelings demand a response from our brain, so that we end up stressing out about stress and lamenting the sadness we feel and thinking about thinking about thinking.

Instead of all that, try this: When a thought arrives, or a situation occurs, or anything at all happens, hold back judgment. Even if it's positive. These judgments are often subconscious, so the first step is to realize we're making them. Observe and acknowledge the item. If it's sadness, accept it. If it's a rude driver cutting you off, move on. If a bird poops on your shoulder, get a paper towel.

As I see it, this is the ultimate goal of any formal mindfulness meditation practice: to do it in daily life.

2. SURFING

Have you ever seen a depressed, anxious surfer? Me neither. In 2011, researchers found that surfers are far less likely to suffer from depression or anxiety than the general population. Last year, scientists even rigged up top surfers with EEGs to quantify the physiological state of "stoke." Although the results haven't been released yet, I'd imagine stoke looks an awful lot like mindfulness.

3. SWIMMING

Many find meditative solace in swimming laps slowly, deliberately. Swimming is great exercise, sure, but those with crisp, clean technique and enough endurance can turn it into a legitimate meditation practice.

As a child, Michael Phelps swam as an antidote to his ADHD because it quieted his mind. Though he didn't call it meditation, it effectively was. Me? I hate long slow laps. They remind me of triathlons too much. If I'm swimming laps, it's a sprint, and I keep it very brief.

But my favorite way to reach a meditative state in the pool is through underwater swimming. You dunk your head and enter another world where sound sounds different, gravity affects you differently, and you're free to explore full-dimensionality.

Nerves along every inch of your body come alive with water contact; the present moment becomes a sensory feast. You also can't breathe, which means my underwater meditations are short bites. Another way is to simply float belly up or belly down.

4. TAI CHI

Practitioners often call it "movement meditation," and that's exactly what it is; research has confirmed many similarities between meditation and tai chi. In one study, elderly Chinese adults living in group homes were placed in tai chi, walking, social interaction, or no intervention groups. The tai chi group saw increases in brain volume, verbal learning, and verbal fluency, as well as improvements in dementia scores. It also lowers cardiovascular risk in women, just like meditation.

5. YOGA

Many yoga practitioners will say that yoga isn't really about the poses or the stretching. It's about the meditation. And when you think about what happens in your typical yoga pose, it's the perfect opportunity to practice acceptance of discomfort.

Those who practice mindfulness are also practicing nonjudgmental awareness of both positive and negative emotions, thoughts, and situations. You can observe that you're feeling sad, or happy, but it's only by identifying with those emotional states that we grant them power over us ("I am sad, and that is a bad thing").

Yoga poses are often painful and uncomfortable. If we can observe the physical discomfort of a particular pose from a detached position, neither running from it nor dissolving into it, we are practicing true mindfulness.

6. MUSIC PRACTICE

Researchers have begun to reconceptualize musical practice as a form of mindfulness meditation. I wouldn't recommend a total beginner grabbing a violin and expecting to reach a state of mindful bliss; you'll just fiddle around and produce a cacophony so jarring that not even the Buddha himself could avoid passing judgment. Instead, use an instrument you can actually use. Grab a hand drum and keep a simple beat. Use a Tibetan singing bowl, strike the side, and observe the resonance. Something simple (or not so simple if you're experienced).

7. VITAMOVES

VitaMoves is a movement practice predicated on moving one's tissues and joints through their full ranges of motion in a deliberate manner. Rather than momentum, you move with presence and intent. Rather than speed through it while thinking about the bills you have to pay, you focus on your body as it moves through space. You feel and focus on the stretch in your lats, the pull of your left hamstring when you move one way, the contraction of the quads when you rise from a full squat. To learn more, go to DailyVitaMoves.com.

How to Slow Down Time When You Lack a Black Hole

Reverse the Feeling of Time Slipping Away With This One Simple Trick

Time passes slowly for children in part because everything they're seeing, doing, experiencing, smelling, hearing, and tasting is new and takes up a larger portion of their memory. They've only just arrived on this plane of existence, and their brains are working overtime to process an abundance of novelty. Each experience is fascinating.

Compare that with the average adult working a 9-to-5.

They get up at the same time every morning. They eat the same breakfast. They take the same route to work. They sit down at their desk and perform the same tasks they performed yesterday and every day prior.

Everything is routine.

The brain doesn't have to work to process any new information or remember the specifics. It's the same thing day in, day out. They can't really remember what they did one, two, three days ago — not because they're going senile at age 33, but because every day is the same and the brain literally doesn't see the need to retain the memory of each.

This is precisely when days slip into months into years and before you know it, you're coming up on 40 and The Simpsons is on Season 27 and the new Star Wars movie's been and gone and is it really 2016?

One researcher devised a cool method to test in the lab the brain's perception of time in response to various stimuli. He showed people a slideshow of identical images of a brown shoe interspersed with the occasional "oddball" image of a flower. Though the flower image spent the same amount of time on the screen as each individual shoe image, participants swore it remained on-screen for much longer than the others. Other researchers have confirmed the "oddball" effect; time lengthens in the presence of novelty.

It turns out that "with repeated presentations of a stimulus, a sharpened representation or a more efficient encoding is achieved in the neural network coding for the object, affording lower metabolic costs." In other words, doing the same routine every day barely registers in the brain. You don't notice it. You don't remember doing it. Thus, entire days are lost.

The takeaway, then is clear: Inject novelty into your life.

Novelty can be objectively exciting things like going to a drum circle at the beach, skydiving, rock climbing, or taking a salsa class.

But small changes work, too.

Take a strange route to work. Take your bike to work. Try a new restaurant every week instead of eating at the same diner.

A Surprising Health Ritual of the World's Ultra Successful

Improve Attention, Reduce Stress, and Literally Increase the Size of Your Brain With This Daily Practice

"If you want to conquer the anxiety of life, live in the moment, live in the breath." — Amit Ray, Indian author and meditation teacher

I'm a devoted fan of the podcast of Tim Ferriss, best-selling author of *The 4-Hour Workweek*. As the book's name suggests, Tim is the leading authority at getting amazing things done in the most time-efficient way.

On his podcast, Tim talks to very successful people — entrepreneurs, athletes, chess champions — about their favorite lifestyle tips.

Success on Tim's show doesn't always mean wealth, though several guests have been billionaires. It simply means the person enjoys and is engaged with life, and is making an unmistakably positive difference in the world. Even the chess champion teaches classes to kids about how to think strategically.

How do they get the energy and drive to do it?

Some eat Paleo-type diets. Some are vegetarian. Some lift weights. Some run. Some don't exercise much at all. Some sleep nine hours. Some sleep five.

However…

All of them meditate. I'd have to go back and re-listen to the 100-plus episodes to be sure, but in my recollection, each of his guests reports regularly meditating.

I was surprised as I realized this. No one has more excuses than these busy folks to blow off a daily period of stillness. Perhaps they have taken to heart the old Zen proverb:

You should sit in meditation for 20 minutes a day, unless you're too busy; then you should sit for an hour.

I have meditated regularly for about three years now and find it extraordinarily valuable. In this article, I'd like to clarify exactly what meditation is, some methods to explore, and some alternatives to traditional "immobile" meditation that I think can be very worthwhile.

WHAT IS MEDITATION?

Typically associated with Eastern religions, meditation and its close ally contemplation have long been part of Western religious traditions as well, including Christianity.

Precise definitions are tricky, but I incline toward this one from Swami Rama (1925–1996), founder of the Himalayan Institute, a pioneering nonprofit group that aims to unite Eastern and Western wisdom traditions:

Meditation is a precise technique for resting the mind and attaining a state of consciousness that is totally different from the normal waking state… Meditation is not a part of any religion; it is a science, which means

that the process of meditation follows a particular order, has definite principles, and produces results that can be verified.

Notice the juxtaposition in the first sentence, so jarring to the modern mindset — a technique for resting and attaining.

If any idea is tattooed on the contemporary brain, it is that rest does not attain. This belief must be the first to go if you wish to bring the value of meditation to your life.

Here is a simple way to think of it. Imagine you are extremely sleep deprived yet required to be alert, positive, focused, and productive. It cannot be done.

Experienced meditators will tell you a regular meditation practice refreshes and enlivens the mind in a way similar to a good night's sleep, but to a vastly greater degree. After only three years of vigorous pursuit of meditation, I have a glimmer of an understanding that this is true. I look forward to deepening that realization for the rest of my life.

Personally, I do 10 minutes of breath-focused meditation each morning: observing, without judgment, the motion of my breath.

I have found that through the years, the spaces between the thoughts have grown "longer." However — and this is rather hard to explain — I've come to realize that *thinking is what creates time.*

In other words, these thought-free intervals are also time-free. That's why they are so profoundly refreshing: They pull us out of the rush and crush of time.

I can't explain it any better than that. It is my hope that you can experience this for yourself.

SCIENCE SPEAKS ABOUT SILENCE

But don't take my word for it…

There have been thousands of studies on the effects of meditation on physical and mental health. Research has found that meditation:

- Preserves the Old Brain: A UCLA study found that people who had meditated for an average of 20 years had more gray matter volume in the brain. Surprisingly, the preservation effect was found throughout the entire brain, not just regions activated during meditation

- Reduces Thoughts of Self: A hallmark of depression is rumination, defined as thinking constantly and compulsively about oneself.

Rumination tends toward negativity — most of us, when self-obsessed, list our shortcomings rather than our virtues. Research at Yale on thought-focused meditators found they had far less activity in the area of the brain devoted to such self-obsessed thoughts.

- Improves Attention: The digital age has transformed attention deficit from an isolated syndrome to a worldwide culture. But both success and happiness still depend on the ability to focus. A recent study showed that just two weeks of meditation training dramatically boosted focus and memory in people taking the General Revised Exam, a broad assessment of thinking and memory skills

- Reduces Anxiety: A form of thought-based meditation called Mindfulness-Based Stress Reduction (MBSR) aims — as the name suggests — to lower chronic anxiety. Brain scans have shown lowered activity in areas that tend to "light up" when a person is anxious.

MANY WAYS TO MEDITATE

There are hundreds, perhaps thousands, of forms of meditation. I can't say which is right for you, but I will point out that your intuition should make one of the following forms seem most likely to bring the rest and attainment you need:

- Spiritual Meditation: If you have a specific, meaningful relationship with God, the object here is simply to focus on that relationship and be ready to receive guidance and wisdom regarding the next best steps to take in your life

- Thought-Focused Meditation: The idea here is to calm the "monkey mind" that insists upon leaping from one conceptual branch to another by focusing on mentally generated sounds, words, or images

- Guided Meditation: This is similar to thought-focused meditation, but the sounds, words, or images come from an outside source — a person or (usually) a recording. This kind of meditation is best for achieving specific goals such as dropping destructive habits or acquiring constructive ones

- Movement Meditation: In the ancient Buddhist practice of kinhin, a group of monks walks clockwise in a circle, taking one step

per breath. But this form is infinitely adaptable. My friend Dr. Jim Nicolai once led me on a walking meditation in the dusky desert near Tucson, and it changed my life. I came to realize that any movement — walking, swimming, running, even swaying gently as one sits — can be an object of focus and contemplation. Ditch the headphones and focus intently on the movement of the legs, the stroke of the arms, or even — most essential of all — the movement of the breath in and out.

BOTTOM LINE

Look, I get it. Despite my dedication to a healthy lifestyle, I did not begin a regular meditation practice until I was 58 years old. So I understand thinking that *With all I've got to get done, I have to meditate now too?*

But while meditation may have been a luxury 20 years ago, the digital age has officially rendered it a necessity. Never in human history have so many exhausting distractions so insistently pulled us out of silence, rest, and renewal. Not to put too fine a point on it, but modern life is driving many of us subclinically crazy — and clinical craziness beckons.

Meditation need not take long. Ten minutes a day is enough to begin, and it may turn out to be all you ever require. You'll know based on the results you get. It need not be difficult. The important thing is to find a practice that seems appropriate for you and begin.

Give it a couple of weeks. If it serves a purpose for you, you'll know it sooner than you expect.

A MOST UNUSUAL WAY TO REDUCE STRESS

I grew up in green, wet Portland, Oregon. But for the last 10 years, I've lived in brown, dry Tempe, Arizona.

One thing I missed profoundly after landing here is the sound of rain. In Oregon, we got too much (at times, it felt like it had been raining for nine months). But here in the Sonoran Desert, we get virtually none.

That's a problem. Studies have established that natural sounds such as that of falling rain can reduce the activity of the sympathetic branch of the nervous system — the part that controls activation and arousal, otherwise known as "stress." Such sounds may also improve productivity.

Technology to the rescue! For several years, I did most of my writing while playing audio from a YouTube video — artlessly but accurately titled "8 Hours of Rain Sounds" — on my Bose QuietComfort 15 Noise Canceling headphones.

Bose no longer sells this model of headphones. I've heard that its successors — the QuietComfort 25 and the wireless QuietComfort 35 — are as good or better.

But just as no one wants to hear only one song forever, that audio got old after a bit.

So after some intensive research, I discovered an app called Thunderspace 5k. I've never looked back.

It costs $4.99 and comes preloaded with three storm sounds, "Roof Garden," "Waterscape" and "Park." You can also pay $2.99 per additional storm, or $24.99 for multi-storm "bundles."

The app and its upgrades may seem expensive, but you get what you pay for. The sound is absolutely flawless — rich, deep, relaxing, with no trace of the "blip" that indicates where the sound loop restarts in cheaper programs.

You don't have to trust the lab-coat brigade on the value of this app — anyone who has ever felt relaxed, refreshed and focused by the symphony of a storm can rest assured that he or she will love it.

With the possible exception of Oregonians, who should just open a window.

The Apostle's Protocol:

The Lost "Medicine" for Healing Your Mind and Body

You can use its incredible power to strengthen your mind and body… improve your focus and concentration… ward off the ravages of Alzheimer's… lower your blood pressure… and live a longer, healthier life with none of the side effects of medication. The medical secret we call "the Apostle's Protocol" is the key to unlocking a host of health benefits.

Could this incredible discovery be scientific proof that the healing powers of Jesus were very real? I'll let you be the judge when you read the lost words of Jesus I'm going to show you in this report.

You can start experiencing all these benefits today when you learn more about this ancient "medicine."

I'm sure you're wondering what major discovery I'm talking about. Well, I'll tell you right now.

WHAT ARE THESE "LOST WORDS OF JESUS"?

The scroll that was dug out of the Egyptian desert in December 1945 was one of 13 texts known as the "Nag Hammadi Library" that were found in

a long-sealed jar dating from around the fourth century. Many scholars believe the ideas in them date as far back as the first century… and may even predate the gospels of Matthew, Mark, Luke, and John, according to biblical scholars at Claremont Graduate University. Lisa Haygood, biblical historian, notes:

Many early Christian sects were aware of and accepted the Gospel of Thomas as authentic Christian scripture… The greatest contribution of Thomas' discovery will be to deepen knowledge and understanding of early Christianity.

The ancient scroll I've been telling you about is called "The Secret Gospel of Thomas," regarded by a little-known group of early Christians called the Naassenes to contain actual words of Jesus that were left out of the Bible.

We know it is very old because it was referenced by an early Christian theologian called Hippolytus of Rome (A.D. 170–235). Hippolytus notes the Naassenes claimed their teachings came from Mariamne, a disciple of the apostle James the Just, leader of the Christian church in Jerusalem.

For centuries, there existed only fragments of this "secret gospel" to study… until that earth-shattering discovery in December 1945. And only recently is its significance coming to light through scientific evidence.

Many historians believe the Nag Hammadi Library was buried by early Christians in a cave in Egypt because of Athanasius, the bishop of Alexandria who believed it was a threat to the power of the Roman Catholic hierarchy. He banned the writings in A.D. 367. They were subsequently buried in the Egyptian desert by early Christians, either to hide or protect them.

WHAT'S WRITTEN IN THE TEXT?

Several of the 114 verses in the "secret gospel" are said to be quotes, teachings, and sayings of Jesus… many you will recognize from the gospels of Matthew, Mark, Luke, and John. Such as:

Jesus said, "You see the sliver in your friend's eye, but you don't see the timber in your own eye. When you take the timber out of your own eye, then you will see well enough to remove the sliver from your friend's eye."

Jesus said, "No prophet is welcome in his own home; doctors don't cure those who know them."

But then there are more mysterious revelations…

Jesus said, "If the flesh came into being because of spirit, that is a marvel, but if spirit came into being because of the body, that is a marvel of

marvels. Yet I marvel at how this great wealth has come to dwell in this poverty."

Jesus said, "The Pharisees and the scholars have taken the keys of knowledge and have hidden them. They have not entered nor have they allowed those who want to enter to do so."

Jesus said, "If you do not fast from the world, you will not find the [Father's] kingdom. If you do not observe the Sabbath as a Sabbath, you will not see the Father."

Jesus said, "When you make the two into one, and when you make the inner like the outer and the outer like the inner… then you will enter the kingdom of heaven."

Apparently, the Naassenes (along with many modern scholars, philosophers, writers, and wellness experts) believed this referred to an ancient practice of attaining mental peace through a special brain technique that creates focus, clarity, and calmness within the mind. Karen Nelson, Christian and author of *Journey to the Heart: Christian Contemplation Through the Centuries,* said:

The teaching of Jesus in the Gospel of Thomas… encourages us to open ourselves to the Divine Reality, to Divine Wisdom. The way is true self-knowledge, arrived at by truly listening in silent interiority to the deeper spiritual significance of his teaching.

That "silent interiority" is crucial to garnering the health benefits we've been talking about… and that's what this practice will help you achieve. Some believe Jesus himself used this technique when he fasted for 40 days in the desert to keep his mind and body healthy.

THE HEALTH BENEFITS OF THE "APOSTLE'S PROTOCOL" ARE VERY REAL

Scholars are still debating the significance, age, and authenticity of this "secret gospel."

But you don't have to believe these are the real words of Jesus… to reap the very real health benefits of the "Apostle's Protocol."

The techniques they employed have been in practice for generations. They are simple but ancient and highly effective ways to reduce stress and calm your body and mind.

It's commonly called "mindful awareness" or simply "mindfulness."

It's a method of becoming aware of your thoughts and feelings that are urgently, endlessly filling your mind so you can "turn the volume down."

It's a tool that's been used for centuries to reduce stress… and it's extremely effective.

It's also gaining popularity… it's even being practiced by U.S. soldiers to help them deal with combat stress and post-traumatic stress disorder (PTSD).

Hundreds of studies have shown its effectiveness in lowering blood pressure; improving memory and cognition; and reducing anxiety and insomnia, chronic pain, and even the symptoms of autoimmune disorders.

Just take a look at what medical experts are saying about it…

> *"For a condition that has few other treatment options — and without FDA-approved medications to stop the progression to dementia — [this "medicine"] may impact the very areas of the brain most affected by Alzheimer's disease"* — Rebecca Wells, MD, Boston, Massachusetts

> *"It only takes 12 minutes [a day,] and it has no side effects. [The Apostle's Protocol] reverses memory loss in people with memory problems."* — David Kennedy, medical director of the Alzheimer's Research and Prevention Foundation in Tucson, Arizona

> *"[Research] provides initial evidence of the efficacy of [the protocol] as a treatment for chronic insomnia."* — Cynthia R. Gross, a Ph.D. at the College of Pharmacy and School of Nursing at the University of Minnesota

So what is this secret to mindfulness and the key to unlocking so many health benefits?

The ancient art of meditation.

HEALTH BENEFITS OF MINDFUL MEDITATION

You might be doubtful, but hear me out. There is a boatload of scientific research supporting the health benefits of meditation and mindfulness. Let's take a quick look at some of the most impressive…

Improving Memory and Cognition: We've long been told that "brain exercises" can help us improve our memories into old age. But what about meditation? According to a study published in the Journal of Alzheimer's Disease, it can! Researchers had 15 participants with memory problems practice meditation for 12 minutes per day over the course of eight weeks. The researchers found that blood flow was increased to the parts of the brain that retrieve memories, and that the participants performed better

on cognition tests. The lead researcher says the findings show that a meditation practice could stop memory problems from progressing.

Reducing Anxiety and Insomnia: We're well aware of the damage stress can do to our brains and bodies. Insomnia is just one of the many side effects of anxiety and stress. Luckily, according to a report from Harvard Health, 50% of participants who suffered from sleep problems had less insomnia, fatigue, and depression at the end of just six sessions of mindful meditation. The key here again is the relaxation response that meditation elicits in the body. According to Dr. Herbert Benson, "The idea [behind daily mindfulness] is to create a reflex to more easily bring forth a sense of relaxation," so that you can more easily relax and drift into sleep.

Mindfulness meditation is also widely used to **treat PTSD** in war veterans. According to Deirdre Fay, a psychotherapist who runs meditation-ptsd.com, this treatment is successful because it allows PTSD sufferers to "befriend the symptoms instead of running away from them or feeling overwhelmed by them."

Soothing Chronic Pain: Chronic pain is a huge issue in the United States, leading to rampant narcotics abuse and, worse, prescription painkiller addiction. Luckily, for those suffering life-impacting chronic pain, meditation could be the solution. In one study out of Wake Forest, 15 volunteers had scans done on their brains while researchers induced pain. They were then taught how to meditate for four days, and on the fifth day their pain intensity ratings were down 40 percent.

Hundreds of studies have been done on this phenomenon. Pain is both a physical and mental sensation. Learning to control it through mindfulness can have a real impact on reducing its effects.

The leader of the Wake Forest study, Fadel Zeidan, explains to *The Atlantic*, "Meditation teaches patients how to react to the pain. People are less inclined to have the 'Ouch' reaction, and are able to control their emotional reaction to pain."

Lowering Blood Pressure: We've already established that meditation encourages relaxation. But the impact of that can be extremely physical, as well as mental. In 2008, Cochrane found that relaxation had a significant reduction in systolic and diastolic blood pressure. Another 2008 study published in *The Journal of Alternative and Complementary Medicine* found that 40 out of 60 patients with high blood pressure were able to stop taking their blood pressure medication once they started meditating.

MAIN TYPES OF MEDITATION

Meditation is a very personal practice and can be changed to fit the individual needs and preferences of anyone who engages in it. Because of this, it's likely that no two meditation practices are the same. They can even vary from day to day for the same person — the techniques that provide the best results for you one day may leave you stressed and distracted the next.

Here are a few of the main types of meditation that you could practice:

Concentration meditation: This is probably what you think of when you hear the word meditation. Concentration meditation requires focusing on a single thing, whether it be an object, a mantra (a word or phrase that you repeat), listening to a repetitive sound like a gong, or using your thumb and forefinger to count beads on a string. The purpose is to train your concentration on your chosen focal point and try to allow it to take all of your attention. As thoughts come into your mind, you are encouraged to recognize the thought and then to bring your concentration back to your chosen focal point.

Mindfulness Meditation: Where concentration meditation pushes away extraneous thoughts, mindfulness meditation accepts them with serene detachment. According to Gaiam Life, "The intention is not to get involved with the thoughts or to judge them, but simply to be aware of each mental note as it arises." As thoughts drift through your mind, resist the urge to label them good or bad, and rather accept their existence and let them drift away. Mindfulness meditation can also be based on awareness, without judgment or attempts to modify, of the breath as it gently rises and falls.

Open-monitoring Meditation: Rather than focusing on one specific object, or only the contents of your mind, you take in everything that is happening around you all at once, both within and without, and try not to react. Think of it almost like you're sitting on a bench in a park staring into space. You see the people move by but don't react to their existence.

Some experts recommend that you choose a meditation type based on your personality and interests. If you're introverted, mindfulness is probably best for you. If you are an avid reader, try a mantra that means something to you. If you're athletic, try meditation while hiking.

ELEMENTS OF THOUGHT AWARENESS

There are a number of elements that can impact your meditation practice. In order for your internal head space to be clear and focused, the space

around you needs to be as well.

Here are a few common elements that are a part of any successful meditation practice:

Breathing: Essentially, every type of meditation is connected to the breath. Start your practice by closing your eyes and focusing on the rise and fall of your breath. Try to make your breathing even, with long, steady inhales and exhales. It helps to focus on each stage of breathing — feel the breath fill your stomach, lungs, and your chest, and then exhale until it all leaves you. Slow, deep breathing is the key to meditation and can often act as a tool to bring your focus back to your practice. Bringing your attention back to your breathing whenever you feel your attention wander can help keep you grounded.

Focused attention: This is the most vital, and most difficult, part of meditating. As I've stated before, there are a number of ways to focus your attention, and many things to choose from. A mantra, an object like the string of beads known as a mala, a single candle, or a spot on the wall can all be a part of your focus. You can also focus on your breath — the sensation of each inhale and exhale can be what you choose to focus on.

A quiet room: Don't make meditation more difficult than it already is. Trying to sink into meditation in a room full of noise or distractions will only make it more difficult. Find a quiet, peaceful setting for your meditation. If your home is crowded and noisy, you could always try moving outdoors.

Comfortable position: Whether it's sitting, standing, lying down, or walking around the room, you need to be comfortable in order to meditate. Getting caught up in the details of the "correct" way to meditate is silly, particularly for beginners. We don't all need to sit like a yogi in lotus position, legs crossed and palms facing upward. Find a position that works for you. The last thing you need is physical discomfort distracting you from clearing your mind.

HOW DO I DO IT?

As we've already discussed, there are many different types of meditation, each of which serves a different purpose for the mind and body. For the sake of this report, we'll focus on mindfulness meditation.

According to Karen Kissel Wegela in Psychology Today, mindfulness meditation "helps us become aware of what is already true moment by moment. We could say that it teaches us how to be unconditionally pres-

ent; that is, it helps us be present with whatever is happening, no matter what it is."

Mindfulness meditation is the most often studied, and is often used in therapy for the many health issues we've discussed in this report.

Here are the basics:

Set up your environment: A nice, quiet room, as we've already discussed, is perfect for a meditation session. Make sure it's comfortable. Some people like to use "props" when they meditate, such as soothing candles, photographs, a journal, or some inspiring books. Whatever works for you, just make sure you're feeling at ease!

Sit down: Traditionally, mindfulness meditation is done while seated. There are special "meditation pillows" that you can use to sit on, if you choose. You can sit on the floor, or in a comfortable chair. Again, this is all about you. Just make sure that you're comfortably supported.

Your posture is important here. Try to sit upright, but not to the extent that your back is arched or overstressed. Imagine a string reaching from the top of your head to the ceiling, gently pulling you upward.

Focus on your breath: Keep your eyes open but your gaze relaxed and focused slightly downward. Don't stare intently at what's in front of you but instead allow your focus to move gradually and naturally inward. Begin to concentrate on the rise and fall of your breath, keeping it slow and even. As your mind begins to wander (which it will, so don't worry about it) try to continually bring it back to your breath.

Once you've relaxed and settled, it's time to start **focusing on your thoughts.** This is where the mindfulness really comes into play. Many people mistakenly believe that meditation is all about emptying your mind. While that is true in some cases, becoming mindful is all about your thoughts.

You're working toward being able to observe all of your thoughts, memories, and emotions, good or bad, without reacting to them. Simply let these things wash over you, acknowledge them, and then set them aside. If you find yourself chasing a particular fear or emotion, let it go and bring your attention back to your breath. Your thoughts should be able to float in and out of your mind without pulling you away from your meditation.

THE BEST WAY TO GET STARTED

I know that this information can be overwhelming. If you've never meditated before, the concepts can be foreign and stressful.

But don't worry! The best thing about meditation is that you can start small and work your way up.

At first, try incorporating just two minutes of meditation into your daily routine. Whether it be right when you wake up or just before you go to bed, carving out two minutes should be enough to start getting used to the idea of meditation and to begin building a habit.

There are also a number of helpful, easy-to-use apps that you can use to guide you in your meditation.

A very popular one is Headspace. Touted as "meditation made simple," the company encourages users to "think of it like a gym membership for the mind."

Their guided meditations can be done in just 10 minutes a day, perfect if you're just starting out. Headspace can be downloaded as an app on your phone, or used on your computer, which is also convenient.

Headspace recommends that you start with their Take10 program. This free trial consists of videos that help you learn the basics of meditation in just 10 minutes per day.

After that, if you like the program, you can subscribe and get access to thousands of exercises, guided meditations, and exercises in mindfulness. Subscriptions vary in price from $12.95 per month to $95.88 for one year or $419.95 for a lifetime membership.

If you'd prefer to work with a free program, try Insight Timer. It offers 1,300 guided meditations, discussion groups and local meetups that you can join, articles to help you with your practice, and a handy timer to use while meditating.

There are a number of books available on meditation, as well. One of our health researchers recommends Meditation for Dummies. An avid meditator, she says this book helped get her started and really helped to explain the process. It also comes along with a CD of guided meditations to help you when you're just starting out.

Finally, if you're more comfortable learning in person, try looking online to see if there is a Shambhala meditation center near you. They tend to offer very affordable classes and weekend retreats and have locations all over the world. The Baltimore office even offers free meditation instruction.

This is a more spiritual form of meditation, tied to a form of Buddhism, so make sure that's something you're comfortable with before attending. If you're looking to start your meditation practice in a more private way,

these centers might not be a good fit for you.

Why Wait?

As we've already suggested, you can get started with meditation anytime, beginning with just a few minutes a day. The health benefits are too overwhelming to ignore. I highly recommend downloading one of the free apps we've discussed, carving out a few minutes in your daily routine, and getting started.

You'll soon settle into a habit that will benefit you for the rest of your life.

The Cheapest Trick for Improving Your Health

I'm a health nut — to call me obsessed would be an understatement. I've dedicated my professional and personal life to finding those things that make the human body healthy.

I can't even begin to calculate the amount of solutions I've tried, lifestyle changes I've made, or dollars I've spent on perfecting it.

The funny thing is, the one thing that has had the absolute biggest impact on my personal health is absolutely free, and requires zero sweat and labor.

As easy and free as it is to improve your health with this secret, you'd think everyone on earth would be jumping on board.

And yet, studies show that most Americans aren't getting nearly enough.

What is this secret, you ask?

It's so simple, you'll think I've finally lost it.

Sleep!

It turns out, sleep deprivation can pose a greater risk than we once thought. In a study done at the Pennsylvania State University College of Medicine, researchers found that mortality rates were significantly increased for men who slept less than six hours a night.

Sleeping is a healing process, necessary for the revitalization of our minds and bodies.

Getting enough sleep at night can reinvigorate you and ensure that your body has the strength to fight against disease.

David Dinges is the head of the Sleep and Chronobiology Lab at the Hospital at University of Pennsylvania, who conducted the longest sleep-restriction study of its kind. He and his team had participants sleep

for four, six, or eight hours per night, and then tested their attention and sleepiness with a P.V.T. — a psychomotor vigilance task.

Both the four- and six-hour groups had results that declined steadily each day. By the end of the two week study, even the six-hour sleep group was lapsing five times as much as they did the first day.

According to a New York Times article reporting on the study, "by the end of two weeks, the six-hour sleepers were as impaired as those who, in another Dinges study, had been sleep-deprived for 24 hours straight — the cognitive equivalent of being legally drunk."

According to the National Sleep Foundation, Americans average 6.9 hours of sleep per night. However, the results of a study at the Walter Reed Army Institute of Research discovered that even those participants getting seven hours of sleep per night had lower response times on the same P.V.T. test after three days.

The results? You need a good eight hours of sleep to be performing at your best and most productive level.

There are some exceptions to this rule — people who can perform their best with less sleep per night. However, Dinges estimates that to be less than five percent of the population, and also stresses the fact that we cannot train ourselves to perform better with less sleep.

How to start? This week, go to bed and wake up at the same time, no matter how tired or how awake you feel. After a few days, you can train your body to wake up and go to sleep at certain times, ensuring that you get enough z's.

An important tip for getting better sleep? Unplug! Televisions, iPhones, iPads, and computers all emit light that's shifted toward the blue end of the visible light spectrum. And that has been shown to suppress melatonin production. (Melatonin is the hormone your brain's pineal gland produces that induces sleep.) To help ensure better sleep, shut off all your electronics at least an hour before bed. That should help reset your natural melatonin production. If you need something to help you unwind, try reading a good book — on paper! — instead.

13 Types of Drugs That Could Damage Your Brain

B vitamins are your best protection against elevated levels of homocysteine, an amino acid produced in the body that in excess, can increase your risk of mood

disorders, poor mental performance, and Alzheimer's disease.

A wide range of drugs, from aspirin to estrogen to diuretics to stomach acid suppressors (such as Nexium and Prilosec) can interfere with the metabolism of one or more B vitamins, which can result in elevated levels of homocysteine. You who are worried about preserving your brain power, take note: medical research now clearly links poor performance on mental function tests to elevated homocysteine levels. Having too much of this amino acid floating around in your bloodstream can cost you a few IQ points! B vitamins are also critical for mood and concentration, and a severe deficiency in B vitamins (especially vitamin B12) can result in symptoms such as severe confusion and mental fog at any age. Elevated levels of homocysteine and/or low levels of B vitamins can also increase the risk of depression, stroke, Alzheimer's disease, vascular dementia, heart disease, and even certain types of cancer. If you are using a drug that depletes your body of B vitamins, you must take supplemental B vitamins daily and demand to have your homocysteine levels checked periodically by your doctor.

PAIN RELIEVERS

- Generic name: Aspirin (acetylsalicylic acid). Brand Names: Pure aspirin is sold under numerous brand names, including many private store labels. Percodan and Empirin are combination aspirin and codeine products.

ANTIBIOTICS

- Generic name: Trimethoprim: antibiotic frequently prescribed for chronic urinary tract infections. Brand Names: Bactrim, Septra

ANTACID AND STOMACH ACID SUPPRESSORS

- Generic name: Cimetidine. Brand Names: Tagamet
- Generic name: Famotidine. Brand Names: Pepcid
- Generic name: Ranitidine. Brand Names: Zantac, Zantac 75
- Generic name: Lansoprazole. Brand Names: Prevacid
- Generic name: Nizatidine. Brand Names: Axid
- Generic name: Omeprazole. Brand Names: Prilosec

ANTIDIABETIC DRUGS

- Generic name: Metformin. Brand Names: Glucophage

ASTHMA DRUGS

- Generic name: Beclomethasone (oral inhaler). Brand Name: Vanceril
- Generic name: Budesonide (oral inhaler). Brand Name: Pulmacort
- Generic name: Budesonide (nasal inhaler). Brand Name: Rhinocort
- Generic name: Flunisolide (nasal inhaler). Brand Name: Nasalide
- Generic name: Flunisolide (oral inhaler). Brand Name: Aerobid
- Generic name: Fluticasone (oral inhaler). Brand Name: Flovent
- Generic name: Mometasone (nasal inhaler). Brand Name: Nasonex
- Generic name: Triamcinolone (oral inhaler). Brand Name: Azmacort
- Generic name: Theophylline. Brand Name: Aerolate

BLOOD PRESSURE-LOWERING DRUGS

- Generic name: Bumetanide. Brand Name: Bumex
- Generic name: Hydroclorothiazide (HCTZ), used alone or in combination with other drugs. Brand Names: Aldactazide, Capozide, Combipres, Dyazide, HydroDIURIL, Hyzaar, Lopressor-HCT, Lotensin HCT, Maxide, Microzide, Moduretic, Prinzide, Vaseretic, Zestoretic.
- Generic name: Triamterene. Brand Name: Dyrenium, or in combination with other drugs in Maxide and Dyazide.
- Generic name: Furosemide. Brand Name: Lasix
- Generic name: Hydralazine. Brand Name: Apresoline
- Generic name: Torsemide. Brand Name: Demadex

ANTICONVULSANT DRUGS

- Generic name: Carbamazepine. Brand Name: Tegretol
- Generic name: Ethosuximide. Brand Name: Zarontin
- Generic name: Fosphenytoin. Brand Name: Cerebyx
- Generic name: Mephobarbital. Brand Name: Mebaral
- Generic name: Phenobarbital. Brand Name: Phenobarbital
- Generic name: Phenytoin. Brand Name: Dilantin
- Generic name: Primidone. Brand Name: Mysoline
- Generic name: Valproic Acid. Brand Name: Depakote, Depakene

CHOLESTEROL-LOWERING DRUGS

- Generic name: Cholestyramine. Brand Name: Colestid

ESTROGENS

There are dozens of different brands of estrogen products, and I have only

listed the major brands here. If you are taking estrogen in the form of birth control pills or hormone replacement therapy, even if you don't see your particular estrogen drug on the list, assume that it works just like any other estrogen and that you need to compensate for the loss of B vitamins by taking additional B vitamins.

- Generic name: Estrogens (with or without progesterone) as contraceptives, oral or skin patch. Brand Names: Ortho-Novum, Ortho Tri-Cyclen, Ovral, Ovcon, Demulen, Loestrin (any estrogen-containing oral contraceptive.)
- Generic name: Estrogens (with or without progesterone) for hormone replacement therapy for menopause or hysterectomy; oral, skin patch, or cream. Brand Names: Premarin, Prempro, Activela, Combinpatch, Estrotest, any hormone replacement product containing estrogen.

ESTROGEN SUBSTITUTES FOR OSTEOPOROSIS

- Generic name: Raloxifene. Brand Name: Evista

ANTI-PARKINSON'S DRUGS

- Generic name: Carbidopa and levodopa. Brand Name: Sinemet

NONSTEROIDAL ANTIINFLAMMATORY DRUGS (NSAIDS)

- Generic name: Celecoxib. Brand Name: Celebrex
- Generic name: Ibuprofen. Brand Name: Advil, Bayer Select, Motrin, Midol, etc.
- Generic name: Indomethacin. Brand Name: Indocin
- Generic name: Naproxen. Brand Name: Naprosyn, Aleve, etc.

CORTICOSTEROIDS: ANTI-INFLAMMATORY DRUGS

Used to treat asthma, arthritis, allergy, and pain.

- Generic name: Methyl Prednisolone. Brand Name: Medrol
- Generic name: Prednisone. Brand Name: Deltasone, Orasone

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EATING TIPS FOR TORCHING FAT AND BOOSTING YOUR HEALTH

What Are The Basic Rules of Healthy Eating?

Most people would be quick to answer that question with the most popular answers. Stick to low-fat products. Avoid red meat at all costs, and choose chicken or fish instead. Keep an eye on your cholesterol. Above all else, keep the butter off the table.

This is what I used to think as well. How could I not, when these solutions are touted everywhere?

I've written this report to show you that a great deal of what we've been taught about nutrition for the last 40 years has been wrong.

After nearly 30 years of working as a health and science writer, it's clear to me that most of the advice doled out by the American Heart Association, the National Institutes of Health, and the U.S. Department of Agriculture has been inherently misleading.

This problem didn't spring up overnight. It's slowly overtaken medicine, politics, and popular opinion for two generations.

In the 1950s and '60s, the country was in a panic about how to tackle the growing rate of heart disease. In the scramble that ensued, leading scientists and nutritionists tried to provide an explanation. They decreed that we needed to cut out saturated fat and cholesterol, ideas that have permeated our culture ever since.

The problem was, the "evidence" that backed up these claims was a chaotic mess of assumptions and poorly executed studies, all based more

on food industry political influence than scientific fact.

How do we know this? Just look at the results! After more than half a century of recommending a low-fat, high-carbohydrate diet to the American public, our health has gone from bad to much, much worse.

Heart disease is now the leading cause of death for both men and women. Obesity has become an epidemic, affecting one in three American adults — it was only one in seven in 1961. Diabetes has skyrocketed, from less than 1% of adults to more than 11% today.

These health issues are a direct result of our diets.

So many of us struggle with our weight and our health. Years of diets and exercise never seem to help melt the pounds away. We fight through breakfasts of cottage cheese and fruit, trade our steak and potatoes for salads and rice, and somehow get fatter, sicker, and sadder.

What if I told you that none of that is your fault? That your diet isn't working because you've been misled about what your body needs to be strong, slender, and healthy?

Contrary to what we have been told, we should be eating more protein and animal fat and less grains and carbohydrates. Milk, eggs, meat, and cheese are far better for you than pasta, bread, cereal, and other grains. And a diet based in fruits and vegetables simply cannot make up for healthy animal fats. In fact, recent studies have shown that any kind of carbohydrates are unhealthy. That includes whole grains, as well as starchy vegetables and fruits.

The war that the National Institutes of Health launched against saturated fats was rooted in unproven theories and skewed data. It led to harmful substances like liquid seed oils (corn, soy, canola) and artificially hardened "trans" fats in our diets. Although the dangers of those are becoming better known, many of the nutritional "facts" still being taught are detrimental to our health and development.

Unfortunately, the media still support the nutrition mainstream and harp on the same old points that have now been disproven.

My goal is simple: to help you to realize that you no longer have to avoid the foods that you love. Don't shy away from red meat. Cover your vegetables in butter. Leave the fruit and fat-free yogurt behind and dive into a plate of bacon and eggs for breakfast.

Trust me — you'll thank me in the long run. Here's my list of "sin foods" that not only taste good, but are good for your health. I hope that it leads you to robust health and happiness, just as it has for me!

LEARNING FROM HISTORY

Think of human history as a 100-yard football field. In the documentary *The Perfect Human Diet,* American scientist Dr. Loren Cordain explains that the first humans anatomically similar to us, known as homo erectus, appeared 2 million years ago at the zero yard line.

Humans walked 99½ yards of that football field eating a high protein and animal diet. Agriculture began only 10,000 years ago. This means grains, legumes, and dairy products were introduced in a major way to our diets only on the half-yard line!

And today? Sugars, wheat, and vegetable oil extracted from seeds such as soybeans and corn make up 70% of the calories we eat. These processed foods didn't become part of our diet until the 1900s, which puts them at the 0.001-yard line!

Since that time, life spans have lengthened due to the conquest of infectious disease, but our years of active, robust, productive health have done nothing but decline. As we continue to ignore the diets that kept us thriving and evolving throughout human history, the results become more severe.

The fact is now clearly established that the low-fat, high-carb diet is a nutritional nightmare. Just look at the soaring obesity and diabetes rates since 1980, when the federal government first began actively promoting this way of eating.

But if it's so wrong, why has it hung on? In a word, money. There is much more profit to be made by selling 4 cents worth of commodity wheat in a $4 box of Wheaties than there is in selling fresh meats and vegetables.

Grains — especially when propped up by federal subsidies — are cheap to grow, harvest, ship, store, and process. This fiscal advantage over meat, fruits, and vegetables is so compelling that the fact that grains are killing you is conveniently ignored!

If you want to get deep into conspiracy theories, you could explore the fact that high-profit-margin agribiz carbs send lots of customers to high-profit-margin medical-biz hospitals.

To be fair, the reality is that this was not entirely done for profit. Nina Teicholz, author of *The Big Fat Surprise,* argues that she found in her research that:

On the whole, the mistakes of nutrition science could not primarily be pinned on the nefarious interests of Big Food. The source of our misguided dietary advice was in some ways more disturbing, since it seems to have

been driven by experts at some of our most trusted institutions working toward what they believed to be the public good.

Whether intentional or accidental, it's still damaging to our health and wellness. And there's no doubt that this system, which keeps Americans fatter and sicker than anyone else in the developed world, is good for big business. That's why it will continue unless individuals like you get the facts and start to take control of your own diet and health.

WHAT TO AVOID

Carbohydrates are unhealthy when eaten in large quantities, despite the fact that various versions of the Agriculture Department's food pyramid have instructed us to eat six–11 servings of them per day.

Carbohydrates also hide in unexpected places. Fruit, for example, tends to be rich in carbohydrates. Many advocates of low-carb diets avoid fruits entirely. In my view, fruit can be beneficial, and it includes many of the vitamins and minerals we need. As long as you are eating a healthy diet filled with protein and fat, small amounts of fructose from low-sugar, cold-climate fruits such as berries or apples won't hurt. The carbs to assiduously avoid are the ones in grains, and "whole" grains are generally no better than any others.

The problem with grains is that they are so ubiquitous in the American diet that they have become almost invisible. When the average person goes out for fast food, he worries about the "unhealthy" beef in his 3-ounce-cooked-weight burger and fails to process the fact that the huge bun of quick-digesting grain is the real health-destroyer in the meal. From cereal for breakfast to sandwiches for lunch to pasta for dinner, grains are the centerpiece of every meal — and we pay the price with our health and, ultimately, our lives.

The low-fat health craze also sparked the rise of vegetable oils. Researchers — well intentioned or otherwise — determined that traditional cooking fats like butter and lard were sure to lead to heart disease and should be replaced by "healthier" options like corn, soy, canola, and safflower oils. The truth is vegetable oils are disastrous for your health, particularly when used for deep-frying. When heated, these polyunsaturated oils oxidize, rendering them highly inflammatory — and chronic, elevated, whole-body inflammation underlies a host of diseases ranging from cancers to Alzheimer's to cardiovascular conditions. They also possess an unnatural amount of omega-6 fatty acid, which, even before oxidation,

can also be dangerous in high quantities.

As bad as polyunsaturated oils can be, they become even more toxic when they are hydrogenated — that is, transformed into room-temperature solids through an industrial process that adds hydrogen atoms to alter the fat's chemical structure.

In her book *Death by Food Pyramid,* Denise Minger explains how Crisco, one of the first commercial hydrogenated oils, rose to unprecedented popularity just a few years after it was released in 1911. As Minger puts it:

Unknown to even the sharpest nutritionists of the day, Crisco had invited two killers into the American diet: trans fat resulting from partially hydrogenated oils and an astronomical intake of omega-6 fats — both now known to increase the risk of heart disease and cause inflammatory immune responses.

To make things worse, the USDA successfully blocked early papers and research warning against the use of hydrogenated oils. Studies were even manipulated so that they could be used as citations for the benefits of vegetable oils when really they increased mortality, cancer rates, and heart disease.

They were simply too profitable for food manufacturers — far cheaper to produce than lard, tallow, or butter; tasteless but palatable; and, because they are relatively inert, a great aid in helping to prolong the shelf life of baked goods and other processed foods. This happened well into the 1990s. It wasn't until 2006 that trans fat had to be listed as an ingredient on labels, and by that time, Americans had been ingesting them for decades.

THE LIES ABOUT SATURATED FAT

Google the phrase "artery-clogging saturated fat" and you'll get back 65,000 results. Pry open the top few hits and you'll find pearls like "butter contains a lot of artery-clogging saturated fat" and "chicken is permeated with inherent artery-clogging saturated fat similar to beef."

There's only one minor problem with pronouncements like this: They are absolutely, categorically false.

The low-sat-fat, high-carb mandate is the most damnable scientific fraud ever perpetrated on the American public. It's responsible for four nightmarish decades of spiraling obesity, diabetes, and cancers.

Big Government, Big Food and Big Pharma have brayed this canard for nearly four decades. Its origins trace back to a 1977 report by Sen. George McGovern's Select Committee on Nutrition and Human Needs, which

featured the phrases "increase carbohydrate consumption" and "reduce saturated fat consumption." These recommendations were based on famously cherry-picked data. So right from the start, the science was shaky.

But the directive got traction because it was a gold mine for the industrial food complex. Grain — which yields high-fructose corn syrup and polyunsaturated soybean oil — is dirt-cheap to grow, harvest, process, store, and sell, especially GMO versions cultivated via herbicide-intensive "no-till" agriculture. It's made even cheaper once you throw in all the government subsidies.

This myth also had the extraordinary advantage of sounding sensible. After all, dump a pan of bratwurst grease down your kitchen sink and it forms a clog. Surely, the same logic applies to your arteries too, right?

Wrong. Your body is optimized to consume saturated fat. Our ancestors avoided hunting lean animals and gorged on sat-fat from the hump of their dinnertime bison. Meals like that directed their evolution, and we inherited their genes.

Saturated fat, whether from your last meal or your love handles, flows in the bloodstream safely within lipoproteins. And lipoproteins don't randomly "stick" to artery walls. Instead, they adhere in response to inflammation, which is often caused by overeating the aforementioned grains, corn syrup, and seed oils. In the absence of these inflammatory agents, not only are lipoproteins safe, but they can actually remove plaques from arterial walls.

From the start, a few brave researchers argued that the science did not support the anti-sat-fat blather. But it took 33 years for the final word to come out. A huge meta-analysis published in the March 2010 issue of The American Journal of Clinical Nutrition found "no significant evidence" that saturated fat in the diet is associated with increased heart disease risk.

Subsequent research has made it clear: The real culprits in raising heart disease risk are sugar, flour, and oxidized seed oils (like the weeks-old soy oil boiling in a fast-food deep fryer). These are what create inflammation, promote obesity, and increase the risk of a wide variety of cancers.

On a practical level, then, this means you should:

- **Eat far less sugar.** In fact, you should cut down on all types of sweeteners. High-fructose corn syrup is neither better nor worse than the rest. Ditch flour-based foods such as breads, cakes, cookies, pancakes, and pretzels. Eschew deep-fried food. It's easier than it sounds. The longer you avoid this junk, the less you desire it

- **Increase your consumption of vegetables.** Go for five–nine servings daily
- **Eat healthful animal-based foods often — at two meals daily at least.** These include pasture-raised beef, pork, chicken, eggs, and wild-caught fish. Also, don't be afraid of organ meats. You should try to eat these twice a month. Did you know calf liver is the most nutrient-dense food you can buy?
- **Eat fruit and nuts,** but sparingly
- **Eat fermented dairy** (cheese, yogurt) if you tolerate it well. Otherwise, skip it
- **Pour your canola, soybean, safflower, and corn oils down the drain.** Use extra virgin olive oil for salads and virgin coconut oil, butter, and non-hydrogenated lard for cooking
- **Put butter in your morning coffee.** This would make most health nuts squirm, I know. However, a tablespoon or so, whirred in the blender, will make your coffee smooth, creamy, and delicious without having to add sugar or over processed creamers. It also helps to extend your energy boost, rather than making you jittery and come crashing down a few hours later. Also, presenting your body with no carbs and almost pure fat first thing in the morning helps to put you into fat-burning mode for the rest of the day
- For extra credit, **develop a taste for bitter foods such as radicchio and dandelion greens.**
- Try alcohol-extracted "bitters" that contain great yellow gentian (Gentiana lutea). Chemicals in these foods moderate blood sugar and optimize digestion. They also cut appetite, helping with weight control.

This is the diet your body — including your arteries — truly needs. You'll be delighted by how it makes you look and feel.

WEIGHT LOSS BENEFITS

Eating this way can also contribute to weight loss.

One of the earliest diets that led to the observation of this phenomenon was the Atkins diet. By drastically reducing carbohydrates, participants

had great results, dropping pounds at a rapid rate. Fascinated by these results, and driven by a shared interest in fitness and nutrition, Drs. Stephen Phinney and Jeff Volek began to look into the biological effects of a low-carb diet in the early 1980s.

They tested athletes like marathon runners, who typically "carbo load" before races to provide them with the fuel they'll need. They found that athletes actually did not require carbohydrates in order to perform their best. In fact, by eliminating carbohydrates as an energy source, our bodies turn to our fat stores for fuel. By removing carbs from our diets, our bodies literally burn fat away.

Weight loss for people on a low-carbohydrate diet is considerably more effective than the standard AHA-recommended diet. Furthermore, the diet has been definitively proved beneficial for heart health. In *The Big Fat Surprise*, Teicholz summarizes the work of Phinney and Volek, saying:

In trial after trial and by virtually every indicator that they could measure, the high-fat diet was shown to lower the risk for heart disease and diabetes compared to the one low in fat and saturated fat that the AHA had proposed to Americans for so long.

Other studies have found that a diet high in fat and low in carbs is also extremely effective against Type 2 diabetes, stabilizing blood glucose and insulin levels, due to the absence of carbohydrates.

There are countless other studies detailing how weight loss is often determined more by what you eat than how much you exercise.

One example of this phenomenon is something that plagues many of us — "man boobs." If you're having a hard time losing them no matter how much time you spend in the gym, it could very well be the result of a diet high in estrogen-mimicking compounds, rather than any fault of yours. You can easily remedy this by increasing your intake of estrogen-blocking foods, like cruciferous vegetables (broccoli, cauliflower, Brussels sprouts, kale), mushrooms, and red grapes.

This is just another example of how the foods you eat affect your body more than you may know. Unfortunately, the reason most people have never heard of these facts is not an accident. Corporate food processors, in league with "health" organizations like the American Heart Association and the Academy of Nutrition and Dietetics (both of which get major funding from processed-carb purveyors such as Coca-Cola) do their best to block scientists from publishing any information that goes against their doctrine.

Eric Westman is a doctor and researcher at Duke University. He has performed about a dozen clinical trials on the effects of the Atkins diet. His studies have shown that diets high in fat and low in carbohydrates have unparalleled advantages in the fight against obesity, heart disease, blood pressure, and diabetes. Despite the evidence, he and his team have a very hard time getting published in science journals or being invited to speak at conferences. He is convinced that this is a result of the existing bias in the media, public conscience, and nutrition community. Teicholz quotes him as saying:

> When an unscientific fear of dietary fat pervades the culture so much that the researchers who are on study sections that provide funding will not allow research into high-fat diets for fear of "harming people," this situation will not allow science to "self-correct." A sort of scientific taboo is created because of

the low likelihood of funding.

Not only are these government-backed institutions prescribing us the wrong diets, but they're also actively impeding the truth about nutrition from reaching the American people.

Read on to discover how you can stop this cycle of lies in its tracks.

BEEF — THE NEW SUPERFOOD

We've already covered how and why red meat came to have such a negative connotation in our country. Claims that it raises your cholesterol, clogs your arteries, and increases your risk of heart disease have caused many people to abandon red meats for leaner options like chicken and fish.

The truth is, however, the muscles and organs of cattle are packed with nutrients that you won't be able to get from the alternatives.

Steak actually has several nutritional advantages over chicken. It is high in iron, zinc, potassium, and vitamin B-12. In fact, a 3-ounce serving of sirloin steak contains 1.6 milligrams of iron, which is essential for brain development and immune function, as well as 4.5 milligrams of zinc, which allows you to taste, smell, and also improve immune function. Comparatively, the same-sized serving of chicken contains only 0.9 milligrams of each of these elements.

Vitamin B-12 promotes brain function and the formation of red blood cells. Animal products are the only reliable source, but a serving of sirloin steak provides 1.5 micrograms, whereas chicken only has 0.3 micrograms.

You also shouldn't forget about the organs. Although they've been large-

ly abandoned on our menus, ingredients like liver, sweetbreads, brains, kidneys, tendons, and bones were all featured in our cookbooks for generations and were highly valued for their nutrition content in many cultures.

Both red meat and liver contain more iron, vitamins, potassium, magnesium, and other nutrients than carrots or apples do. In fact, ounce for ounce, beef liver has eight times the vitamin C of apples and 50 times the vitamin A of carrots.

EAT THIS, DON'T EAT THAT

How often do you find yourself staring at a menu wondering what you should choose?

You might really want to order a mouthwatering rack of ribs and an ice-cold pint of beer. I know I do.

But the little voice in the back of your head — or, let's be honest, your spouse's voice from over your shoulder — encourages you to pick the healthy option.

Is there anything more frustrating than denying yourself the foods you want and not seeing any results?

As I've said before, this is simply not your fault.

It may surprise you that the meals you've been considering healthy options are actually worse for you in the long run. In some cases, the foods you're longing to eat are the better choice, even if you're being told the opposite.

Below are a few examples of how the dominant ideas of what's good versus bad to eat might not be correct after all. Sometimes, the rich foods you crave are better after all!

LOW-FAT YOGURT AND FRUIT OR BACON AND CHEDDAR OMELET?

Most people would assume that sticking to a yogurt mixed with fruit for breakfast is the way to go. However, you might want to think twice about how to begin your day.

To create low-fat products like yogurt, manufacturers have to take the fat out and put something else in — usually sugar. A fat-free "healthy" yogurt can have just as much sugar in it as a Snickers bar!

As an Op-Ed by Teicholz in *The Wall Street Journal* points out, "Even seemingly healthy low-fat foods, such as yogurt, are stealth carb-delivery systems, since removing the fat often requires the addition of fillers to

make up for lost texture — and these are usually carbohydrate-based."

The carbohydrates and sugar in your fruit and yogurt make insulin spike, which means stored fat. It also means hitting that mid morning slump and often being hungry again by 10 a.m.

Eggs, in comparison, are high in protein and good fats, containing the essential amino acids our bodies need for growth and repair.

Bacon and whole-fat cheese, when sourced from grass-fed animals free of hormones, are nothing but beneficial for you.

It wasn't until Americans started replacing animal fats with carbohydrates and vegetable oils that we really saw the rise of coronary disease. So throw in some sautéed, nutrient-dense organic vegetables and eat your omelet — and cook it in clarified butter, too!

WHOLE WHEAT VEGGIE SANDWICH OR PORK CHOP WITH GRAVY AND LEAFY GREENS?

Go for the pork. Pork supplies essential protein and fat, while the greens provide vital nutrients, and neither of them will spike your insulin like grain-based carbohydrates.

Excessive carbohydrates lead not only to obesity but also over time to Type 2 diabetes and heart disease. And bread supplies among the biggest carb loads of all.

It's not just white flour that's the problem. Even though we are told that whole wheat bread is a healthy choice, Teicholz suggests even that can do harm:

Too much whole-grain oatmeal for breakfast and whole-grain pasta for dinner, with fruit snacks in between, add up to a less healthy diet than one of eggs and bacon, followed by fish. The reality is that fat doesn't make you fat or diabetic. Scientific investigations going back to the 1950s suggest that, actually, carbs do.

Meanwhile, greens like kale, chard, spinach, and collards provide vitamins and minerals that are otherwise hard to obtain, like magnesium, potassium, calcium, and manganese. Consuming them will help protect you against disease, promote heart health, and stimulate your brain.

They are also rich in fiber, which can "lower cholesterol and blood pressure, and help to temper blood sugar swings by slowing the absorption of carbohydrates into your bloodstream after meals."

Swapping out your midday sandwich for a nice piece of meat and a salad drizzled with quality extra virgin olive oil won't just taste great. It will

nourish you and help give you the energy you need for the rest of your day.

PLATE OF HUMMUS AND PITA OR BISON BURGER WITH AVOCADO AND CHEESE?

Hummus and pita are high in carbs, while avocados, bison meat, and full-fat cheese offer healthy fats and keep insulin low and steady. Snacking on hummus and pita chips will curb your hunger for a short amount of time but provide you with very little nutritional value. Once your body comes down from the insulin spike of those chips, you'll be hungry again.

What you should aim for is to eat a meal that is nutrient-packed and provides you with other dietary benefits. That way, you won't only satisfy your hunger, but also feed your body and mind.

The National Bison Association cites research that shows that the "meat from bison is a highly nutrient-dense food because of the proportion of protein, fat, mineral, and fatty acids to its caloric value… Bison has a greater concentration of iron as well as some of the essential fatty acids necessary for human well-being."

Avocados have also long been heralded as a superfood. They're high in healthy fats called oleic acid — the same found in olive oil. Oleic acid has been linked to reduced inflammation and has beneficial effects on genes linked to a lowered risk of cancer. They also are high in antioxidants and fiber.

Ounce for ounce, avocados also contain more potassium than a banana, with a 100 grams per serving. AuthorityNutrition.com has several studies listed that "show that having a high potassium intake is linked to reduced blood pressure, a major risk factor for heart attacks, strokes, and kidney failure."

Best of all, they're delicious!

Combining bison meat, avocado, and some full-fat cheese together makes for a lunch that is more filling and more nutritious than an empty snack of hummus and pita chips. You can add other veggies as toppings as well, if you'd like.

Just make sure that you skip the bun!

And as we've seen, these fats are not harmful. Even famed TV doctor Mehmet Oz admitted he was wrong about fats.

After promoting a low-fat diet for years, he make a shocking admission to his audience: "For years I have warned you about the health risks of a diet high in saturated fat," said Dr. Oz. "Today I'm coming to a shocking realization; 40 years of diet advice may be completely wrong! In a revolu-

tionary reversal, more doctors, including myself, are saying that saturated fat may not be so bad for you after all. "

STEAK AND BROCCOLI OR CHICKEN CAESAR SALAD?

Steak and broccoli is the winner here. Steak is full of good saturated fats, including one called stearic acid that may actually lower heart disease risk, and broccoli provides a range of healthful micronutrients.

Although chicken is often touted as being the healthier choice, that is largely because it is low in fat. We've already put the two head-to-head in this report and have shown how steak is higher in many nutrients.

The croutons and Caesar dressing involved in a chicken Caesar salad are empty carbohydrates. And although romaine lettuce is comparable to broccoli in regard to nutritional value, containing antioxidants, protein, magnesium, and calcium, being smothered in Caesar dressing pretty much eliminates those benefits.

An average serving of Caesar dressing has about 1,200 calories, 7 g of sugars, and an astonishing 2,533 mg of sodium — that's 106% of the suggested daily value, in case you were wondering.

Remember, dietary fat doesn't mean fat on your body, and dietary cholesterol doesn't mean cholesterol in your blood. Your liver makes most of the cholesterol — an absolutely vital organic compound — that your body needs. Eating cholesterol simply spares your liver the burden of synthesizing so much of this essential compound.

And as Nina Teicholz says, animal foods like red meat, milk, cheese, and eggs "are particularly dense in nutrients — far more so that fruits and vegetables. They contain fat and protein in the proportion that humans need. They have been shown to provide the best possible nutrition for healthy growth and reproduction."

Never assume that a salad is going to be the healthiest choice on your menu. In many cases, a well-balanced entree will provide more nutritional value.

SWEET POTATO WEDGES OR MASHED POTATOES?

Go for sweet potatoes every time.

Normally, potatoes are something we'd suggest you avoid, since they are high in starch and other carbohydrates. They cause your blood pressure to spike and then dramatically fall.

However, potatoes make up a huge part of our diets. French fries, mashed potatoes, baked potatoes with bacon and sour cream — we crave them all.

Sweet potatoes are a great compromise if you're looking to supplement that part of your meal with something a little healthier.

Sweet potatoes offer not only delectable taste, but also two big health advantages over the common white potato — a 58% lower glycemic index (a measure of a food's ability to raise blood sugar) and far higher nutrient density. Sweet potatoes are especially rich in beta carotene, which the body converts to vitamin A.

They're also delicious, which always helps!

GLASS OF RED WINE OR GREEN SMOOTHIE?

This one's a little different. A green smoothie is full of vitamins and minerals and could very well be a healthy part of your day.

But which would you really prefer?

The truth is there are a ton of benefits to moderate drinking. And when you put a fine wine next to a smoothie that looks suspiciously like baby food, I think we both know what you'd like to choose.

Some reports show that drinking one glass of wine is equal to one hour of exercise.

The secret is resveratrol, which improves physical performance, heart function, and muscle strength.

The study came out of the University of Alberta. Principal investigator Jason Dyck said that he and his team "were excited when [they] saw that resveratrol showed results similar to what you would see from extensive endurance exercise training."

Reports from Harvard also now confirm that "red wine may contain more and more various substances in addition to alcohol that could prevent blood clots, relax blood vessel walls, and prevent the oxidation of low-density lipoprotein (LDL, 'bad' cholesterol), a key early step in the formation of cholesterol-filled plaque."

Overall, you should be able to indulge in any alcoholic beverage with dinner. Harvard's report also shows that in a study of 38,000 men over 12 years, "moderate drinkers were 30–35% less likely to have had a heart attack than non drinkers." This benefit came regardless of drinking beer, wine, or spirits.

The Nutrition Lessons of Leave It To Beaver

This Kitchen Staple Has Been Demonized for Decades… But It's Actually Healthy

From 1957–63, the television show *Leave It To Beaver* portrayed the low-key suburban adventures of Theodore "The Beaver" Cleaver, his older brother Wally, and their parents, Ward and June.

As a kid, I logged so many hours in front of the black-and-white tube that I came to feel like the Beav's younger, slightly more streetwise brother (Theodore's boundless naiveté was part of the show's appeal).

Feeling nostalgic, I recently dropped in on the Cleavers via Netflix. I found them both familiar and as anachronistic as an *Australopithecus* in line at Starbucks.

Through modernity's prism, June was the most bizarre.

Always turned out in a dress and pearls, she was eerily emotionally cool, kept the home impossibly immaculate, and served the family formal dinners on fine china each evening.

As a nutrition and health writer, I found those dinners fascinating pieces of culinary anthropology.

One first notices how modest they were. Each of the Cleavers' plates was precisely trisected into sections for the meat, mashed potatoes, and vegetable. The portions were, by contemporary standards, minuscule.

But most evocative of the era was the omnipresent stick of butter at the table's center, in a cut glass tray.

Today, of course, butter is banned from the dinner table (among the few quaint families who still eat dinner at tables), as it's widely reviled as the source of arterial clogs. But the Cleavers were innocent of such notions.

Lucky them!

THE BENEFITS OF BUTTER

Butter is a saturated fat, which is loosely defined as fat that stays solid at room temperature. Five decades of anti-saturated fat propaganda (it was inflicted on an innocent nation just after Leave It To Beaver's cancellation) have lately been proved to be pure fiction.

A seminal 2010 study established that "there is no significant evidence for concluding that dietary saturated fat is associated with an increased risk" of heart disease.

So the Cleavers' butter-centric repasts were heart-healthy after all. And

they provided other advantages as well. While some '50s-era nutrition fads deserved their tumble into history's garbage disposal — fiber-free Wonder Bread comes to mind — this one merits a revival.

Consider: How did such small portions satisfy Ward, June, and the boys, as well as the millions of real American families they emulated?

It was the butter! Eisenhower-era families applied it to every item on the plate.

Shortly after the 2010 saturated fat scientific redemption, I started putting butter on my vegetables. I found that it promotes satiety — the long-lasting feeling of fullness and satisfaction that has been almost entirely missing from the last five decades of high-carb, low-fat eating.

Getting calories from fat, not carbs, also keeps your blood levels of insulin under control — and insulin is what conducts fat into your cells for long-term storage.

Buttered vegetables also simply taste better. Try them just once and you'll realize that life's too short for the Calvinist trial of choking down plain, steamed, or boiled plants. Making veggies taste better assures you and your family will eat more of them, thereby gaining increased benefits of their nutrient density and fiber.

Finally, butter itself is a significant source of nutrition. Saturated fat creates strong, resilient brain tissue, nerves, and cell membranes, and helps synthesize important hormones — including testosterone. Good fats like this also help the body absorb the fat-soluble vitamins A, D, E, and K from the vegetables.

So even if vacuuming in pearls isn't a common occurrence in your crib, emulate the Cleavers in this important respect. Purchase high-quality butter (look for "grass fed" or "pasture raised" on the label) and apply it liberally to your vegetables.

And keep it on a cut glass tray. As the Cleavers demonstrated, butter deserves respect.

Your Grandmother's Secret Ingredient is (Finally) Making a Comeback

The Scare Campaign Around Lard Was Never True, So It's Time To Bring it Back Into the Kitchen

No single food better exemplifies the power of bad press than the rendered fat of pigs, also known as lard.

It is, in the minds of many, the very definition of an unhealthy food, evoking visions of clogged arteries and expanding waistlines.

But that's incorrect. Here's why.

THE BIG SHIFT

In 1900, the average American ate about 18 pounds of lard annually. But as it was costly to render, ship, and store, producers were decentralized and profit margins were thin.

In 1911, Procter & Gamble began a massive campaign to persuade Americans that Crisco — cheap cottonseed oil chemically hardened with hydrogen — was healthier.

It was a lie. Considering human beings have no evolutionary history with such artificial fat, it's unsurprising that research has since shown that seed oils like this — whether or not they are hydrogenated — offer no advantage when it comes to cardiovascular risk, and may even raise that risk.

But humans *do* have a long history of feasting on ruminants such as pigs and their fat, which is why lard desperately needs a new PR campaign. It's a wonderful fat to use daily.

IT IS HEAT STABLE

Fats are comprised of varying numbers and bonds of carbon atoms. And though it seems counterintuitive, in the world of chemistry, double bonds between carbon atoms are less chemically stable than single bonds.

"Saturated" fats — and lard has a fairly high percentage of such fats — have lots of single bonds, meaning they retain their structural integrity when heated.

Meanwhile, polyunsaturated fats, such as soy, canola, sunflower, and safflower oils, have a high percentage of unstable double bonds. Heat them for frying and they oxidize, a process that makes them highly inflammatory.

IT CONTAINS TWO VITAL NUTRIENTS

Lard from pastured pork is rich in vitamins B-12 and D. Each is essential for human health, but according to the Environmental Working Group, deficiencies of both are common. And the fact that vitamin D is fat-soluble means that eating it as part of a natural fat is the best way to properly assimilate it.

IT MAKES FOOD DELICIOUS!

Because lard has a higher smoke point than other fats, it can be made hotter, which means foods fried in it absorb less grease. And while I'm not a great fan of baked goods, due to their high carbohydrate content, lard produces ultra-flaky pie crusts and outstanding biscuits.

In the last five years, for the reasons listed above and more, lard has made a huge comeback.

Quality lard is now available at natural food stores, including Whole Foods, and online.

As to how to use it — any use to which you would normally put (shudder) Crisco or virtually any other cooking fat is likely amenable to being adapted to lard. A quick Internet search will bring up hundreds of recipes as well.

Try it. You will love your lard!

Five Proven Benefits of Coconut Oil

A Once-Shunned Dietary Fat Makes a Well-Deserved Comeback

Coconut oil is one of the few foods that can be classified as a "superfood."

Its unique combination of fatty acids can have profound positive effects on your health, including fat loss, better brain function, and various other amazing benefits.

Following are the top five health benefits of coconut oil that have been experimentally confirmed in human studies.

1. Coconut Oil Contains a Unique Combination of Fatty Acids With Powerful Medicinal Properties

Coconut oil has been demonized in the past because it contains saturated fat. In fact, it's one of the richest sources of saturated fat known to man, with almost 90 percent of the fatty acids in it being saturated.

However, new data are showing that saturated fats are harmless. Many massive studies that include hundreds of thousands of people prove that the whole "artery-clogging" idea was a myth.

Additionally, coconut oil doesn't contain your average run-of-the-mill saturated fats like you would find in cheese or steak.

No, they contain so-called medium-chain triglycerides (MCTs) — which are fatty acids of a medium length.

Most of the fatty acids in the diet are long-chain fatty acids, but the medium-chain fatty acids in coconut oil are metabolized differently.

They go straight to the liver from the digestive tract, where they are used as a quick source energy or turned into so-called ketone bodies, which can have therapeutic effects on brain disorders like epilepsy and Alzheimer's.

Bottom Line: Coconut oil contains a lot of medium-chain triglycerides, which are metabolized differently and can have therapeutic effects on several brain disorders.

2. Populations That Eat a Lot of Coconut Are Among the Healthiest People on the Planet

Coconut is kind of an "exotic" food in the Western world primarily consumed by health-conscious people.

However, in some parts of the world, coconut is a dietary staple that people have thrived on for many generations.

The best example of such a population are the Tokelauans, who live in the South Pacific. Over 60 percent of their calories come from coconuts, making them the biggest consumers of saturated fat in the world. These people are in excellent health, with no evidence of heart disease.

Another example of a population that eats a lot of coconut and remains in excellent health are the Kitavans of Papua New Guinea.

Bottom Line: Plenty of populations around the world have thrived for multiple generations eating massive amounts of coconut.

3. Coconut Oil Can Increase Your Energy Expenditure, Helping You Burn More Fat

Obesity is currently one of the biggest health problems in the world.

While some people think obesity is only a matter of calories, others (myself included) believe that the sources of those calories are critical too.

It is a fact that different foods affect our bodies and hormones in different ways. In this regard, a calorie is *not* a calorie.

The medium-chain triglycerides (MCTs) in coconut oil can increase energy expenditure compared with the same amount of calories from longer-chain fats.

One study found that 15–30 grams of MCTs per day increased 24-hour energy expenditure by 5 percent, totalling about 120 calories per day.

Bottom Line: The medium-chain triglycerides in coconut oil have been shown to increase 24-hour energy expenditure by as much as 5 percent, potentially leading to significant weight loss over the long term.

4. Coconut Oil Can Kill Your Hunger, Making You Eat Less Without Even Trying

One interesting feature of coconut oil is that it can reduce your hunger.

This may be related to the way the fatty acids in it are metabolized, because ketone bodies can have an appetite-reducing effect.

In one study, varying amounts of medium- and long-chain triglycerides were fed to six healthy men. The men eating the most MCTs ate 256 fewer calories per day on average.

Another study in 14 healthy men discovered that those who ate the most MCTs at breakfast ate significantly fewer calories at lunch.

These studies were small and only done for a short time. If this effect were to persist over the long term, it could have a dramatic influence on body weight over a period of several years.

Bottom Line: The fatty acids in coconut oil can significantly reduce appetite, which may positively affect body weight over the long term.

5. Coconut Oil Can Improve Blood Cholesterol Levels and May Lower Your Risk of Heart Disease

Coconut oil is loaded with saturated fats, which actually do not harm the blood lipid profile like previously thought.

Saturated fats raise HDL (the good) cholesterol and change the LDL cholesterol to a benign subtype.

In one study in 40 women, coconut oil reduced total and LDL cholesterol while increasing HDL compared against soybean oil.

There are also rat studies showing that coconut oil reduces triglycerides and total and LDL cholesterol, increases HDL, and improves blood coagulation factors and antioxidant status.

This improvement in cardiovascular risk factors should theoretically lead to a reduced risk of heart disease over the long term.

Bottom Line: Studies in both humans and rats show that coconut oil improves important risk factors like total, LDL and HDL cholesterol, which may translate to a reduced risk of heart disease.

Bananas: Too Sweet to be Healthy?

They're the Perfect On-the-Go Fruit… but Are Bananas Really Good for You?

Bananas are among the world's most popular fruits.

They are highly portable and easy to consume, making them a perfect on-the-go snack. They're also fairly nutritious and contain high amounts of fiber and antioxidants.

Many people have doubts about bananas, though, due to their high sugar and carb content.

So in the interest of health, let's peel back the yellow skin and take a closer look at bananas.

BANANAS CONTAIN SEVERAL IMPORTANT NUTRIENTS

Over 90 percent of the calories in bananas come from carbs. As the banana ripens, the starch in it turns into sugar. For this reason, unripe (green) bananas are high in starch and resistant starch, while ripe (yellow) bananas contain mostly sugar.

Bananas also contain a decent amount of fiber, and are very low in protein and fat.

Many different types of bananas exist, which causes the size and color to vary. A medium-sized (118-gram) banana contains about 105 calories. A medium-sized banana also contains the following nutrients:

- **Potassium**: 9 percent of the RDI
- **Vitamin B6**: 33 percent of the RDI
- **Vitamin C:** 11 percent of the RDI
- **Magnesium:** 8 percent of the RDI
- **Copper**: 10 percent of the RDI
- **Manganese**: 14 percent of the RDI
- **Fiber**: 3.1 grams.

So in addition to being a good source of several nutrients, bananas also contain other beneficial plant compounds and antioxidants, including dopamine and catechin.

BANANAS ARE HIGH IN FIBER AND RESISTANT STARCH

Fiber refers to carbs that cannot be digested in the upper digestive system.

High fiber intake has been linked to many health benefits, and as each banana contains about 3 grams, this makes them a good fiber source.

Green or unripe bananas are rich in resistant starch, a type of indigestible carbohydrate that functions like fiber. Resistant starch has been linked

to several health benefits, including: improved colon health, increased feeling of fullness after meals, reduced insulin resistance, and lower blood sugar levels after meals.

HOW DO BANANAS AFFECT WEIGHT LOSS?

No study has investigated the effects of bananas on weight loss. However, one study of obese, diabetic people investigated how unripe banana starch affected body weight and insulin sensitivity.

They found that taking 24 grams of banana starch each day for four weeks caused weight loss of 2.6 pounds (1.2 kg), while also improving insulin sensitivity.

Other studies have also linked fruit consumption to weight loss. Fruit is high in fiber, and high fiber intake has been associated with lower body weight.

Moreover, resistant starch has received some attention recently as a weight loss-friendly ingredient.

It may contribute to weight loss by increasing fullness and reducing appetite, thus helping people eat fewer calories.

Although no studies have shown that bananas per se cause weight loss, they have several properties that should make them a weight loss-friendly food.

That being said, bananas are not a good food for low-carb diets. A medium-sized banana contains 27 grams of carbs.

BANANAS ARE HIGH IN POTASSIUM

Bananas are a major dietary source of potassium, an important mineral that many people aren't getting enough of. It plays a crucial role in blood pressure control and kidney function.

A diet rich in this mineral can help lower blood pressure and positively affect heart health. A high potassium intake is also linked to a reduced risk of heart disease.

BANANAS ALSO CONTAIN A DECENT AMOUNT OF MAGNESIUM

Bananas are a good source of magnesium, another important mineral in the body.

Hundreds of different bodily processes rely on magnesium to function, which is perhaps why numerous studies have found a high intake of mag-

nesium may protect against various chronic conditions, including high blood pressure, heart disease, and Type 2 diabetes.

ARE BANANAS SAFE FOR DIABETICS?

Opinions are mixed about whether bananas are safe for people with diabetes, since they are high in starch and sugar.

However, they still rank low to medium on the glycemic index, which measures how foods affect the rise in blood sugar after a meal.

Bananas have a glycemic index value of 42–62, depending on their ripeness.

Consuming moderate amounts of bananas should be safe for people with diabetes, but they may want to avoid eating large amounts of bananas that are fully ripe.

DO BANANAS HAVE ANY NEGATIVE HEALTH EFFECTS?

Bananas do not seem to have any serious adverse effects. However, people who are allergic to latex may also be allergic to bananas. Studies have shown that around 30–50 percent of people who are allergic to latex are also sensitive to some plant foods.

LIKE MOST FRUIT, BANANAS ARE VERY HEALTHY

Bananas are very nutritious. They contain fiber, potassium, vitamin C, vitamin B6, and several other beneficial plant compounds.

Although bananas are unsuitable on a low-carb diet and may cause problems for some diabetics, overall, they are an incredibly healthy food.

Beef: The Smart, Compassionate Choice

Don't Believe The Critics... Beef Is Good For You And The Planet

For the last few decades, virtually everyone seems to have agreed that eating beef is a bad idea: bad for the planet, bad for personal health, and bad morally.

The problem? Beef haters are wrong on all counts. Beef can be a boon for the planet, extraordinarily healthful, and a highly moral choice.

Let's take these one at a time:

Good for the planet: I'll gladly concede that modern, *industrialized* beef

production is an ecological disaster. Sending cattle to feedlots, where they gorge on glyphosate-soaked, GMO corn while standing in e-coli infected manure, is no one's idea of an earth-friendly, sustainable system.

But I come from a long line of Oregon farmers and cattle ranchers, and I vividly recall how up until the 1960s, cattle were intelligently integrated into small, mixed-use family farms.

To simplify: A 200-acre farm could be divided into 50-acre quadrants — one for grazing cattle, one for grain, one for a mix of specialty crops like vegetables, and one for a nitrogen-fixing cover crop.

Each year, these uses would rotate. Far from devastating the land, the manure from grazing cattle actually *improved* the crop planted on that land the next year. Cattle made small farms more sustainable and *more* productive.

And here's a mind-blower: Cattle are powerful carbon-fixers! Each time a cow takes a step, its sharp hooves push grass — which is primarily made of carbon pulled from the atmosphere — into the soil. Cattle manure does the same thing. In other words, via two mechanisms, cattle "fix" free carbon, a greenhouse gas, in the Earth's crust.

This means that intelligent grazing practices, "can take us back to pre-industrial [CO2] levels… and feed people," says biologist Allan

Savory. In fact, his research indicates, "only livestock can save us."

Fortunately, farms that rely on sensible rotation grazing are making a comeback. To find a source of beef from such an operation near you, go to **www.EatWild.com**

Good for you: No one has ever shown convincing evidence that beef consumption is bad for health. Since beef has been so thoroughly demonized for the last five decades, the only people who consumed it in quantity were those who ignored all health advice — in other words, they also smoked, were sedentary, ate copious amounts of processed carbohydrates, and so on.

Studies that link beef consumption to cancer, diabetes, and so on are invariably tainted by these "confounding" variables. Further, no large-scale study I've been able to locate has bothered to differentiate between health effects of eating beef from grain-fed versus grass-fed cattle — despite the fact that grass-fed animals have a more favorable ratio of heart-healthy omega-3 fats.

The fact is, human beings evolved by, and came to thrive upon, consuming the muscles and organs of a variety of animals, including large ruminants like cattle. Red meat is an excellent source of:

- **Vitamin B12,** which is vital to mental and physical health, especially in protecting the integrity of nerves and the cardiovascular system

- **Vitamin D,** and particularly a partially metabolized form called 25-hydroxycholecalciferol, which is much more easily assimilated than the forms of vitamin D one gets in supplements

- **Iron,** in a form called heme iron. This is more readily absorbed than the nonheme iron found in plant foods

- **Saturated fat,** the kind of fat your body needs. Saturated fat is structurally sound fat — and since the membranes of your cells are made of fat, it pays to make them out of this solid, rather than liquid, form of fatty acid.

- **CLA,** or Conjugated linoleic acid. Found in meat, cheese, and milk, CLA has been shown to improve insulin action in mice studies, and decrease glucose levels. As a result, researchers have hope that a diet rich in these foods could benefit those with type 2 diabetes.

Morally bad. Drive through farm country anywhere in the U.S. The only animals you will see grazing in fields are beef cattle.

Pigs and chickens are raised almost entirely in captivity these days, but all cattle spend at least part of their lives grazing in pastureland.

And if you seek out grass-fed, grass-finished beef, you will be consuming an animal that led a calm, pleasant, evolutionarily appropriate life grazing outdoors for its entire existence.

You'll also get a higher percentage of heart-healthy omega-3 fatty acids than you would with conventional, feedlot-finished beef. And you'll avoid ractopamine, a drug used to increase muscle mass in about 30% of feedlot cattle, and which has been linked to a cardiovascular and other health problems in humans who eat meat that contains it.

In any case, if you are concerned about compassionate treatment of farm animals, eating beef must be your first choice.

Now, one last point on the morality of eating beef.

In the high mountains of Tibet, Buddhist monks eat the flesh of yaks, a close relative of domestic cattle. When asked how they reconcile this with their religion's emphasis on compassion, the monks reply that "taking one life feeds many people for many days."

Conversely, they point out, the death of a chicken or fish feeds just one or two people for a single meal.

It's a fascinating point to ponder, and one I've never heard expressed anywhere in this country.

I think the monks make a very important point. There's a tragedy in the fact that we must kill animals to eat optimally. But one can't wish away a million years of our co-evolution with animal foods, and the nutritional requirements it instilled in us.

If that unfortunate fact of life can be mitigated via the monk's calculus — establishing that the deaths of large animals for food means the smallest number of animal deaths overall — then I am wholly for it.

Bottom line: Beef can and should be in regular rotation in your diet, particularly if you can secure an organic, grass-fed, grass-finished source.

It is not only ecological and healthful — it is a morally sound choice.

Are You Eating Too Much Meat?

You Should Be Eating Meat on a Regular Basis… But How Much *Exactly*?

There are upper limits on meat intake, just as there are upper limits on everything.

Let's ignore the outliers — the folks who really do feel better on all-meat diets and the people who insist they thrive on zero-meat diets. Instead, let's focus on regular people: people trying to lose some body fat. People following a strength training regimen. Elderly people. The upper limit of how much meat you can consume is affected by all the different contexts in which people find themselves.

How?

STRENGTH TRAINING

Strength training's relationship to protein intake is a curious one. Lifting heavy things actually makes you more efficient with your protein. As long as you're lifting, you do more with less. You can get away with eating less protein.

On the other hand, lifting weights makes higher doses of protein safer. Animal studies show that large, acute increases of protein intake can stress the renal system and cause metabolic disturbances. Left unchecked, this is dangerous. If the animals are performing resistance training, however, the kidneys can handle larger doses of protein without issue.

Humans seem better adapted to higher protein intakes (it doesn't harm our kidneys unless they're already damaged), but I'd imagine the protective effect of resistance training is similar.

What this means is that strength training both reduces your protein requirements and increases the amount of protein you can safely utilize. Weird, right? You can eat more, but you don't necessarily have to.

As for the 1 gram per pound of bodyweight bodybuilder diets you hear about? Novices can probably benefit from higher protein intakes, as they have a higher "gains ceiling" and gain muscle fairly quickly. More experienced lifters who are closer to their ceiling and gain muscle more slowly (if at all) don't need as much protein. For natural lifters, 1.8 grams per kilogram seems to be the absolute ceiling. After that, the benefits level off and you're just wasting protein.

DIETING

Dieters don't just lose body fat. They lose lean mass, too. Protein content of the cutting diet is a major determinant of how much lean you lose. In study after study, high protein intakes while dieting preserve lean mass and preferentially burn body fat.

A 2013 study split dieters into three groups: one eating the protein Recommended Dietary Allowance (RDA) of 0.8g/kg, one eating twice the RDA (1.6g/kg, or about 120 grams per day) and one eating three times the RDA (2.4g/kg, or about 185 grams per day). Fat intake was constant across all groups, and carbs filled in the rest.

There were no differences in weight loss, but the two latter groups lost more body fat than lean. The group eating the RDA lost significantly more lean mass.

The more you cut calories, the more protein you need. And not in a relative sense — you need to increase your absolute protein intake to limit loss of lean muscle mass.

OK, OK. GOT ANY NUMBERS, SISSON?

Start with about a pound of meat a day, give or take a few ounces. Depending on what type of meat you're eating, that'll give you about 85–90 grams of protein. Additional protein from other foods (dairy, eggs, nuts, seeds) should put you in the realm of 100–120 grams of protein. That's where I am most days — between 100 and 120 grams of protein. It's a good place to start.

Eating a greater proportion of gelatin, either supplementarily via delicious chocolate almond bars or by favoring gelatinous meats (skin, cartilage, shanks, necks, oxtails) and drinking bone broth, will increase your safe upper limit of meat.

There are no hard-and-fast answers. There is no single number that's right for everyone. It depends on many factors. In biology, that's typically the case. But hopefully, you feel equipped to tailor your meat consumption to your personal context.

The Salty, Crunchy Truth About America's Favorite Food

Is Bacon Bad for You… or Good?

Many people have a love-hate relationship with bacon.

They love the taste and crunchiness but are still worried that all that processed meat and fat may be harming them.

Well, there are many myths in the history of nutrition that haven't stood the test of time.

"For healthy people who don't have high blood pressure, there is no evidence that eating a bit of sodium causes harm."

Is the idea that bacon causes harm one of them? Let's find out…

BACON IS LOADED WITH FATS… BUT THEY'RE "GOOD" FATS

Bacon is usually derived from pork and goes through a curing process where it is mixed with salt, nitrates, and other ingredients.

The fats in bacon are about 50% monounsaturated, and a large part of those is oleic acid. This is the same fatty acid that olive oil is praised for and is generally considered "heart healthy."

Then about 40% is saturated fat, accompanied by a decent amount of cholesterol. But we now know that saturated fat isn't harmful and cholesterol in the diet doesn't affect cholesterol in the blood. Nothing to fear.

Depending on what the animal ate, about 10% are polyunsaturated fatty acids (mostly omega-6). These are the "bad" fats in bacon, because most people already eat too much of them.

However, if you choose bacon from pastured pigs that ate a natural diet, then this won't be much of an issue.

If your pigs are commercially fed, with plenty of soy and corn (like

most pigs are), then the bacon may contain enough omega-6 to cause problems.

I personally wouldn't worry about it much, especially if you're already avoiding vegetable oils, which are the biggest sources of omega-6 in the diet.

Bottom Line: The fatty acids in a typical batch of bacon are about 50% monounsaturated, 40% saturated, and 10% polyunsaturated.

BACON IS FAIRLY NUTRITIOUS

Meat tends to be very nutritious, and bacon is no exception. A typical 100 gram portion of cooked bacon contains:

- 37 grams of high-quality animal protein
- Lots of vitamins B1, B2, B3, B5, B6, and B12
- 89% of the RDA for selenium
- 53% of the RDA for phosphorus
- Decent amounts of the minerals iron, magnesium, zinc, and potassium.

Bacon is also pretty high in sodium, which makes sense given how it is cured with sodium during processing.

I personally think the risks of sodium are way overblown. Some studies show that excess sodium can elevate blood pressure and raise risk of heart disease, while other studies show that too little sodium leads to the opposite result.

If you're already avoiding the biggest sources of sodium in the diet (processed, packaged foods), then I don't think you need to worry about the amount of sodium in bacon.

For healthy people who don't have high blood pressure, there is no evidence that eating a bit of sodium causes harm.

Bottom Line: Cooked bacon is loaded with many nutrients. It is quite high in sodium, which may be a problem for people with elevated blood pressure.

NITRATES, NITRITES, AND NITROSAMINES

Now that we know saturated fat, cholesterol, and normal amounts of sodium are usually nothing to worry about, this leaves us with the nitrates.

Apparently, some studies conducted by some scientists a long time ago linked nitrates with cancer. However, these studies have since been refuted.

Nitrates aren't some artificial compounds unique to bacon. Our bodies are loaded with them, and the biggest dietary source is vegetables.

Yes, vegetables are loaded with nitrates. Even our saliva contains massive amounts of them. These are compounds that are natural parts of human bodily processes.

There is some concern that during high-heat cooking, the nitrates can form compounds called nitrosamines, which are known carcinogens.

However, vitamin C is now frequently added to the curing process, which effectively reduces the nitrosamine content.

The harmful effects of nitrosamines are outweighed by potential benefits, as dietary nitrates may also be converted to nitric oxide, associated with improved immune function and cardiovascular health.

Bottom line: There may not be any reason to fear the nitrates in bacon. Nitrates are part of the human body and found in massive amounts in other foods like vegetables.

HOW TO MAKE THE RIGHT CHOICES

As with most other types of meats, the quality of the final product depends on a lot of things, including what the animals ate and how the product was processed.

The best bacon is from pasture-raised pigs that ate a diet appropriate for pigs.

If you can, buy bacon from local farmers that use traditional processing methods.

If you don't have the option of purchasing your bacon directly from the farmer, then eat supermarket bacon, keeping in mind that the quality can vary. Generally speaking, the less artificial ingredients in a product, the better.

If you want to make your own bacon, you can buy pork belly and then process or prepare the bacon yourself.

Bottom Line: As with other types of meat, the feed the animals ate and the conditions they were raised in can have a profound effect on the final product.

TAKE-HOME MESSAGE

In my opinion, bacon can be consumed as part of a healthy, real-food-based diet. It is also pretty much the perfect food for people eating low-carb diets.

There are some potential concerns, but I personally don't lose sleep over them, as I know I am avoiding the foods that are truly awful, such as

sugar, refined carbs, and vegetable oils.

I have personally made the choice to continue eating bacon a few times per week, as I have been doing for some time now.

In my opinion, a life with bacon in it sure as hell beats a life without it.

A Nutritious "Meat" Even Vegetarians Can Enjoy

Why Even Those With Moral Qualms Should Feel Comfortable Eating Oysters

I've made it abundantly clear — I favor consumption of animal-based foods.

Humans co-evolved with them. We can do without them for a time, but at least some are required for robust health.

Meats, poultry, fish, eggs, and dairy foods contain vital nutrients that cannot be found in optimal quantities in vegetables, fruits, and grains. These include vitamins B-12 and K-2 and the minerals zinc and selenium.

However, an estimated 5 percent of American adults — about 12 million people — are vegetarians. They often cite two main reasons for their choice: Killing sentient beings is morally wrong, and raising animal-based foods is environmentally destructive.

Which brings us to oysters.

While these tenacious sea creatures are not plants, in the realm of compassionate eating, they are essentially the same thing. Oysters lack a central nervous system. There's no evidence they are in any sense conscious or can feel pain.

They are also typically raised in oyster farms, which have a minimal impact on ecosystems. Oysters eat plankton, which is low on the food chain. They need no pesticides, and unlike wild-caught fish and clams, harvesting them doesn't require destructive "bycatch" of unwanted species.

Best of all, they are absolutely packed with precisely the nutrients in which vegetarians and vegans are likely to be deficient.

Oysters are high in quality protein and contain abundant selenium, zinc, iron, and magnesium. In addition, they contain a range of B vitamins, especially B-12, which is absolutely vital for healthy brain function, particularly as we get older. Three ounces of oysters also provides more than a gram of heart-and-brain-healthy omega-3 fatty acids.

So my veggie brothers and sisters… eat them.

Even famed moral philosopher and bioethicist Peter Singer has decreed that, for vegetarians and vegans, "There is no good reason for avoiding eating sustainably produced oysters."

OYSTERS: A CHEAP INSURANCE POLICY

It's easier to fold this exotic food into your quotidian diet than you might think. I bought the Blue Point oysters pictured to the left at my local Whole Foods in Tempe, Arizona. While at $1.69 apiece they were not exactly cheap, I consider a plate of these every couple of weeks to be a more-than-worthwhile investment in health.

If I were vegetarian, I would see the expense as cheap insurance against a *dead-certain nutrient deficiency.*

When I asked the gentleman behind the counter if they were fresh, he replied, "They fly them to all of our locations in one day. So unless you get them from the boat, they are pretty much equally fresh in any Whole Foods, no matter how far it is from the coast."

They certainly tasted fresh, so I'll take his word for it.

I like my oysters raw, but cooked ones retain a good deal of their nutrient value. So one easy way to work them into a busy day is in the form of Crown Prince Natural Smoked Oysters, which come canned in olive oil.

This brand is available at Trader Joe's or from Amazon for about $3 a can and is so easy to toss into a bag lunch. I have a couple of cans a week.

So if you eat oysters, do you have to tear up your vegetarian card? Probably, but the compensation is that you get to call yourself a "sentientist" — a cool, (literally) intellectual term coined by Peter Singer to describe "a person who thinks that creatures besides man have coherent thoughts and therefore can suffer and so should get our consideration."

A worthwhile sentiment. While I don't plan to become a pure sentientist anytime soon, even the carnivores among us can take comfort in displacing at least some of our meaty main courses with a briny, savory serving of oysters.

Fat or Carbohydrates: Which is Better for High Performance?

Enhance Your Metabolic Efficiency With This Macronutrient

When the 1973 oil crisis hit, my dad, a pretty handy guy, converted his Chevy truck so that it could run on propane as well as gasoline.

The dual-fuel capability turned out to be quite useful. Dad could avoid gas price hikes by using propane (then as now, nearly all propane was produced in the U.S., and prices were stable). He could also top off both tanks and drive prodigious distances without bothering to refuel.

Today, as I dig into the biochemistry of metabolism, I'm often struck by the fact that human beings are even more versatile. We can operate on three fuels, also known as the three macronutrients: protein, carbohydrate, and fat.

Of the three, protein is by far the inferior propellant. High-protein diets are hard on the kidneys, since waste products from metabolism can overload these delicate organs. But human beings can — and do — metabolize either fat or carbohydrate much more easily. The question: Which is better for performance and long-term health?

Most modern American nutrition authorities are firmly in the pro-carb camp, but not because carbs are the better fuel. It's because carbs, especially from subsidized grains, are cheap to grow, harvest, ship, store, and process, so profits are enormous. Preserving this profit engine is the hidden agenda of virtually all nutrition policymakers.

But running largely on dietary fat is not only possible, but potentially highly desirable. This state is called *nutritional ketosis,* a metabolic condition characterized by the body preferentially metabolizing fat, rather than carbohydrate or protein, for energy.

Arriving at this state takes time — at least a couple of weeks. While there is plenty of individual variation, roughly, one achieves and maintains it by eating no more than 10% of calories from carbohydrate, 20% from protein, and the remaining 70% from fat.

Advantages to this eating approach are legion:

- Fat melts away
- Inflammation recedes, as do the risks of its attendant diseases: cancer, Alzheimer's, Parkinson's, cardiovascular disease, and more
- Endurance skyrockets, and the body draws on relatively abundant fat stores, rather than paltry blood glucose, for energy.

On that last point, let me plant one image in your mind.

Two years ago, a chap named Tim Olson won the grueling Western States 100-Mile Endurance run in the Sierra Nevada mountains of eastern California. Incredibly, he knocked 21 minutes off the 40-year-old race's record time — and he did it by training with a low-carb, high-fat diet

based on meat, eggs, coconut oil, abundant veggies, minimal grains, and virtually no sugar.

By training his body to burn fat, Olson could efficiently use the roughly 30,000 calories worth of fat-based fuel that even a thin, athletic guy like him has stored in his tissues.

Conversely, the body can store only a limited amount of carbohydrate. Typically, carb-adapted ultramarathon runners need to eat and digest roughly 6,000 calories en route, while fat-adapted athletes like Olson need just 2,000 calories — a huge advantage in metabolic efficiency.

Back in 1973, my dad flipped a toggle to switch fuels. For human beings, the changeover is never as absolute — you'll always metabolize both fuels, but a larger percentage will be fat.

But just as Dad's tinkering paid off, entering nutritional ketosis is worth the effort. Even if you don't plan to win an ultramarathon, you'll enjoy easier weight loss, lowered disease risk, and all-around abundant health. In future issues, I'll offer more details on this highly desirable metabolic state.

Calories Are Not Created Equal

It's Time to Put the Myth to Rest

You've no doubt heard that "a calorie is a calorie."

In other words, it does not matter if the calorie in question came from a steak, apple, or doughnut — eat more calories than you "burn" and you'll gain weight.

Simple. But wrong. Here's why.

In 1824, Parisian engineer Nicolas Clément needed a measuring unit that would allow him to compare energy potentials of various steam-engine fuels such as coal or wood.

He came up with the kilocalorie. It is the amount of heat needed to raise a kilogram of water by one degree centigrade. The term was later shortened to "calorie."

So far, so good.

But 63 years later, American chemist Wilbur Atwater wedged this round peg into a square hole. He applied the term into an entirely different field — the measurement of energy potentials in the human diet.

Atwater may have been a fine fellow, but this was, not to put too fine a point on it, an astoundingly stupid move.

Even in 1887, nutrition science had advanced enough that it should have been clear: Human metabolism isn't as simple as a burner under a water tank.

This is why three foods can have identical calorie counts, but one will want to burn as energy, the second will prefer to cling as fat, and a third will discretely exit *via la toilette*.

To complicate matters further, these three foods may have profoundly differing effects on appetite. A steam engine boiler must be content with what it's fed, but hungry humans can be quite ingenious about securing their own food — often to excess.

In short, metabolism is revealing itself to be far more complex than Atwater ever imagined.

Hormones play an enormous part. If we eat more glucose (primarily from carbohydrates) than we need for our typically sedentary lives, the hormone insulin will surge from the pancreas and facilitate storing that energy as fat. Spiked insulin vastly ramps up *lipogenesis* — the technical term for fat-making. It also recedes quickly, leaving us very hungry.

But if we eat more fat — especially pure fat, and very little carbohydrate — insulin and fat deposition are muted. The calories are either metabolized or excreted, and the hunger that follows is typically far more manageable.

Indeed, the effect of hormones on weight and hunger is so profound that science writer Gary Taubes has argued that obesity is fundamentally due to a hormonal — rather than caloric — imbalance.

So consider the fact that five cans of Coca-Cola have the same calorie count as a single 10-ounce rib eye steak.

The former, consumed nightly, will make you diabetic, obese, and, ultimately, dead. The latter enjoyed just as often will keep you lean and fit.

Same calorie count. Dramatically different hormonal, metabolic, and lipogenesis effects.

So if you must count something, count carbohydrate grams! A yearlong study conducted by Lydia Bazzano, nutrition professor at Tulane University, confirmed that that low-carb dieters were able to lose more than the study's low-fat group while consuming equivalent calorie counts. They also significantly decreased their estimated 10-year risk for coronary heart disease, while the low-fat group did not.

Low-carb weight-loss strategies aren't new, but the science is finally catching up with what we've been observing for decades. All calories are

not created equal, and the best way to avoid chronic metabolic disease is a low-carb lifestyle centered on abundant vegetables, quality protein, and healthy fats, including butter, lard, and olive oil.

Leave the calories to the mechanical engineers.

The Cholesterol Double Take

For Decades, You've Been Misled, but Now Health Authorities Are Finally Admitting the Truth

Remember 1961?

- Those sneaky Soviets surprised us by launching the first satellite, Sputnik, kicking off the space race
- President Eisenhower soberly warned about predations of the "military-industrial complex"
- Elvis Presley crooned "Are You Lonesome Tonight?" to swooning teens.

And way back in 1961, the American Heart Association began warning Americans that some of their favorite foods — including eggs, liver, and shellfish — contained a potentially dangerous compound called "cholesterol" and urged them to limit its consumption.

Never mind that these were all foods that had been traditionally associated with robust health and with which humans had a million years of evolutionary history.

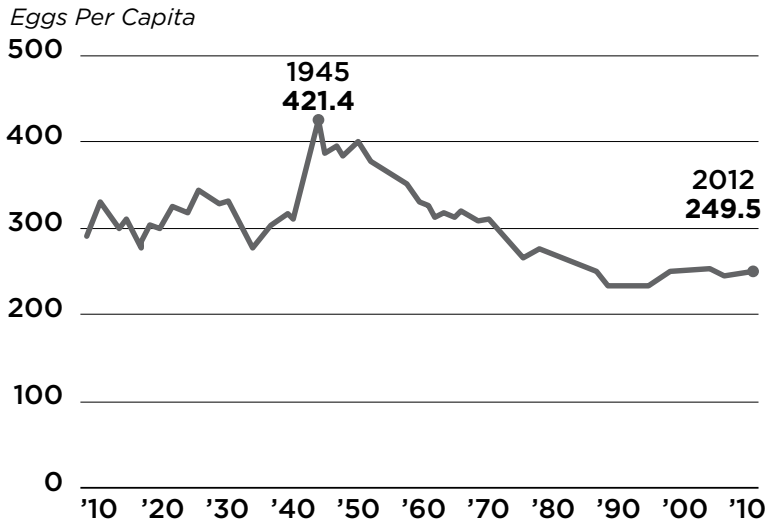
Over the next few years, Uncle Sam codified that advice: Eat no more than 300 milligrams of cholesterol daily. And since one egg contains 185 milligrams, indulging in just two in a day, the dour fellow proclaimed, put you at elevated risk for heart attack or stroke.

It's worth noting that no one had asked for this information. In fact, the idea that the government should tell its citizens what to eat seemed vaguely absurd to many people — what did the feds know about nutrition that, say, Grandma didn't?

Nonetheless, WWII had conditioned a once-independent populace to take direction from an ever-expanding Washington bureaucracy. The people dutifully complied. Check U.S. egg consumption on the following page.

But as it turns out, there was a tiny problem with that recommendation.

It was utterly wrong, and probably seriously harmed the health of everyone who followed it.



Source: USDA.

After 54 years, the government is finally halfheartedly admitting it.

In February 2015, a preliminary document from the U.S. Dietary Guidelines Advisory Committee was reported by *The Washington Post* as stating that "cholesterol is not a nutrient of concern for overconsumption."

But just as we should never have listened to the "avoid eggs" exhortation, we should also ignore this weak-kneed, mealy-mouthed exoneration.

That's because dietary cholesterol is not merely "safe." Grandma understood what eluded our doddering, compromised Uncle Sam for over half a century — that eggs contain an absolutely vital nutrient, one you should make vigorous effort to eat daily.

Far from a toxin, cholesterol is the raw material from which the body makes hormones that protect against heart disease and cancer, as well as the sex hormones testosterone, estrogen, and progesterone.

You've heard that vitamin D deficiency is rampant? Well, in response to sunlight penetrating the upper layers of the skin, the body makes "D" from cholesterol. Low cholesterol means low D, a nutrient that contributes to over 300 metabolic functions.

And if you've wondered why one in 10 Americans takes an antidepressant, it may be because we've carefully avoided dietary cholesterol — which is a building block of serotonin, the "feel good" chemical that elicits serenity and focus.

How did we get it so wrong? It's a long story, but here's a hint: "heart healthy" Cheerios, whole wheat bread and fat-free milk are *much* more

profitable than eggs, liver, and shellfish — and the manufacturers of the former foods employ hundreds of lobbyists.

I'll have more to say about cholesterol — both dietary and blood-borne — in future issues. But for now, I will simply urge you to eat eggs regularly, not to mention other cholesterol-rich foods such as liver, lobster, and shrimp. These are nearly perfect foods for human consumption.

Unlike refined carbohydrates — which Americans now eat in abundance, especially for breakfast — these ancient, animal-derived foods stabilize blood sugar, are dense with vital nutrients, and are among your best allies for keeping obesity and diabetes at bay.

They also reduce the liver's obligation to crank out the cholesterol the body so desperately needs, a respite that may support liver health. This, in fact, is what the government ultimately had to admit — eating lots of cholesterol almost never significantly boosts blood levels of this nutrient, because the liver simply responds by creating less.

I typically eat two hard-boiled eggs daily, usually first thing in the morning. I eat liver about twice a month, and tear into shrimp and lobster regularly. I regard these habits as among the key reasons I feel energetic, sharp, and focused at age 60, while maintaining an ideal weight too.

I'll conclude with a prediction. The next dietary advice the government will retract is its multi decade warnings regarding saturated fat — the kind that's abundant in meats, butter, and cheese. The science exonerating saturated fat as a heart disease risk factor was nailed down in a gigantic meta-analysis published in 2010.

But I implore you not to wait for that fateful announcement, as it may not come for years. When it does, it will be the same song and dance — saturated fat will be declared merely "safe," when, in fact, it is a cornerstone of vibrant health.

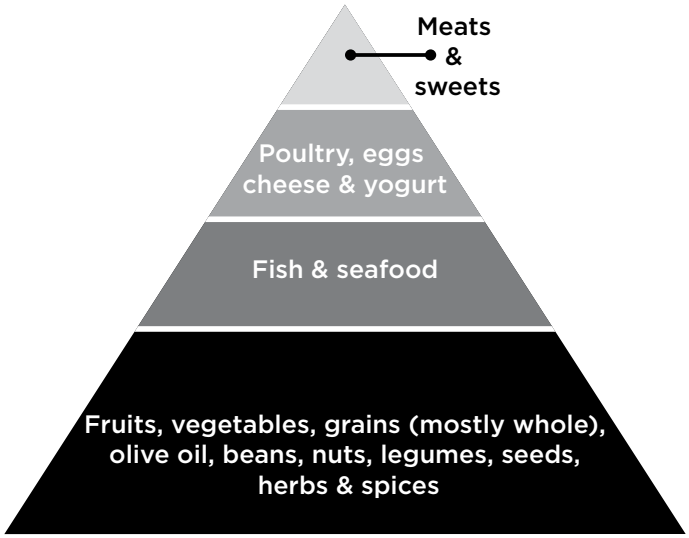
Eat eggs. Eat butter. Then relax, crank up some '60s Elvis, and take solace in the fact that when it comes to nutrition advice, the lobbyists never got to Grandma.

Dirty Secrets of the Mediterranean Diet

It's More Hype Than Substance...

For the last 25 years, mainstream nutrition writers have touted the Mediterranean Diet as the absolute, incontrovertible, *ne plus ultra* way to eat.

And what is it, exactly? Here's the graphic representation:



Got it? It's pretty simple.

Meat is bad — as bad as candy! Fish, eggs, and dairy — OK. Plant-derived foods — even carb-intensive ones, such as grains — good! Olive oil is good too; it's essentially the only acceptable form of fat.

Since the early '90s, a nonprofit group called Oldways has been the principal force pushing this diet relentlessly on the Web and elsewhere.

Here's Oldways' description of the diet:

The Mediterranean Diet is a way of eating based on the traditional foods (and drinks) of the countries surrounding the Mediterranean Sea… It has been studied and noted by scores of leading scientists as one of the healthiest in the world.

Yet…

Virtually no one, including its many worshippers, understands certain basic facts about this diet — facts that cast it in a decidedly less favorable light.

Look closer and it becomes clear that the reason the MD has a lock on American nutrition recommendations has more to do with corporate agendas and profit potential than incidentals such as your health.

So let's explore three truths.

1. There is no such thing as a Mediterranean Diet, except in the fevered brains of nutrition academics bribed by Aegean junkets.

First-rate journalist Nina Teicholz did the world a great service in her

2014 book *The Big Fat Surprise: Why Butter, Meat, & Cheese Belong in a Healthy Diet* by digging into the MD's dodgy origins.

As she points out, there are many *different diets* followed by the Europeans and North Africans on both sides of the Mediterranean Sea:

The Mediterranean Diet with a capital "D," the nutritional concept and program that has been endorsed worldwide by scientists and government bodies alike, didn't really exist before the nutrition experts themselves invented it.

Consider… though France occupies a big chunk of the Mediterranean coast, the "experts" concocting the MD tossed out the French diet altogether. The fact that it's high in saturated fat yet heart-healthy (France has the lowest cardiovascular disease rate in Europe) didn't fit their agenda.

Further, some of the diet's principles are based on research into what peasants in Crete ate in the 1950s. These folks seemed to consume very little meat or dairy. But according to Teicholz:

- This survey happened right after WWII, when food supplies were still scarce
- Astoundingly, "Their diet was sampled *during Lent*, when animal foods were severely restricted."

As it turns out, the MD was largely a from-scratch creation of Antonia Trichopoulou, a professor at the University of Athens Medical School. It rose to prominence in the 1990s via a variant of junk science that might be called junket science. Again from Teicholz:

> The method involved inviting academic researchers, food writers, and health authorities into a slice of paradise: travel, free of charge, to some sun-kissed country around the gorgeous Mediterranean Sea, for the purpose of a scientific conference… In Italy, Greece, and even Tunisia, scientists rubbed elbows with cookbook authors, chefs, journalists, and public officials. Harvard provided the scientific prestige, while Oldways organized the financing.

According to Teicholz, Oldways organized an astounding 50 conferences between 1993–2004 — which, you may recall, is the decade in which the MD transitioned from unknown to dietary dogma.

Oldways teamed up with the International Olive Council to sponsor these events, got some big, grain-pushing American food companies to

help foot the bill, *et voilà* — a grain-and-olive-oil-centric diet was born!

Meanwhile, the researchers ignored the more meaty, less "grainy" diets of, for example, Mongolia, Siberia, and Germany. All of these also had long-lived populations and low heart disease rates — but they possessed, as Teicholz puts it, "fewer sun-drenched conference spots."

2. Actual clinical trials are showing that a diet higher in animal protein and/or saturated fat, and lower in carbohydrates, decisively trounces the MD in virtually any health measure you choose.

Research that compares what's termed a paleo or low-carb diet (consisting mainly of meats, fish, eggs, vegetables, fruits, and nuts) against the MD consistently indicates that the MD is sorely lacking. The paleo diet:

- Provides more satiety (the feeling of fullness that lets you easily restrict calories)
- Supports the heart health of people with a genetic tendency toward high cholesterol better than Mediterranean-type diets
- Is far more successful when it comes to weight loss.

The reason the MD seems so successful in studies is that many of its clinical trials pit it against the execrable "Standard American Diet," also known by the appropriate acronym SAD.

The fact that the MD beats out a diet rich in soda, doughnuts, and french fries does not necessarily mean it is the optimal human diet. Nutritionally, the SAD represents a very "low bar," one that virtually any diet containing unprocessed food can hurdle.

3. Oldways, the nonprofit behind the Mediterranean Diet, has some interesting sponsors.

"Oldways' mission is to guide people to good health through heritage. We like to say let the old ways be your guide to good health and well-being," reports its website.

Riiiiiiggghhht. Except grains and olive oil have been eaten in quantity for no more than 3,000 years.

Meats, vegetables, and fruits have been part of human diets for as long as there have been human beings. Depending on how you classify hominids, that's anywhere from 200,000–2 million years.

Grains, in particular, are relentlessly pushed. But not because they are "traditional." Rather, thanks to modern technology, they are cheap to grow, harvest, store, and process, so the potential profit margins are vast.

So what motivates Oldways? I would not care to speculate.

But according to Oldways' website, its "recent supporters" roster includes grain-centric corporations including Coca-Cola, Arby's, Cargill, ConAgra, Domino's Pizza, Dunkin' Donuts, Frito-Lay, General Mills, J.M. Smucker, Kellogg's, Kraft Foods, and Nestlé, as well as an assortment of bakery and snack companies.

THE GOOD ASPECTS OF THE MD

I like some aspects of the MD, especially its emphasis on fish, vegetables, and fruits. These should be major parts of any healthy diet.

I think it's also clear that olive oil — principally a monounsaturated fat — is a healthier choice than polyunsaturated seed-oil fats such as corn, canola, or soy oil. The latter fats oxidize easily when heated, are highly inflammatory, and are probably major drivers of heart disease.

But I've seen absolutely no evidence persuading me that that olive oil is a healthier choice than highly saturated oils such as coconut oil, butter, or leaf lard from free-range pigs. These oils, rather than olive oil, are the best choices for the principal fats in a healthy diet.

Bottom line: No one *needs* grains, whole or otherwise. Each mouthful of grain in the daily diet drives inflammation and obesity and displaces a potential mouthful of nutrient-dense animal or vegetable food.

The Asian Paradox

If Carbs Make People Fat, Why Are Rice-Eating Asians So Thin?

So you've developed a reputation among your friends and family as "the low-carb guy" or "gal."

If so, this is bound to happen…

At a cocktail party, after a few pops, a skeptic will thrust a finger in your face and proclaim, "If carbs are so bad, how can the Japanese and Chinese eat all that rice and stay so thin? Huh? Huh?"

It's an interesting question.

The Japanese and Chinese do eat quite a lot of carbohydrate in the form of rice. Yet they have obesity rates far below those of average Americans.

Some analysts have explained this paradox by citing exercise levels (both Asian populations walk more than Americans) or some special property in rice that renders it less lipogenic (fat-forming) than, say, wheat or corn.

But neither of these strikes me as compelling. Exercise levels between urban Asian and American cultures are similar. And I've seen no persuasive evidence that carbohydrates from rice are less lipogenic than those from other grains.

I strongly suspect that the real reason is found in a specific gene called AMY1, present in saliva. It's the one that directs the body to make amylase, the starch-digesting enzyme.

If you chew a soda cracker to a pulp, keep it in your mouth, and feel it turning sweet, that means your AMY1 genes have dutifully cranked out amylase to begin converting that cracker's starch to sugar.

The important thing to understand about AMY1 is that it's a bit like brains, good looks, and musical talent. We might wish that such things were evenly distributed to all of God's children, but it just does not work that way.

While human beings have, on average, six copies of the AMY1 gene, the number is just that — an average. As Denise Minger points out in her excellent book *Death by Food Pyramid:*

In humans, AMY1 copy number can range from one to 15, and amylase levels in saliva can range from barely detectable to 50 percent of the saliva's total protein. That's a lot of variation!

And what accounts for that variation? You guessed it — local evolutionary pressures:

Folks from traditionally starch-centric populations, like the Japanese or the Hadza of Tanzania, tend to carry more copies of AMY1 than folks from low-starch-eating populations, like Siberian pastoralists or hunter-gatherers from the Congo rainforest.

To grasp why this matters so much, let's look at recent research comparing what happens when members of low- and high-copy-number AMY1 groups chow down on carbs:

As seemed logical, the researchers thought the high-amylase participants would have the strongest blood sugar response from eating starch, seeing as they'd be breaking it down into sugar molecules more efficiently. But the human body, the infinite wonderland that it is, had a surprise in store, and the study took a fascinating turn. The results — published in the *Journal of Nutrition in 2012* — showed that low-amylase producers faced

skyrocketing blood sugar after eating starch, in contrast to the less dramatic rise seen among high-amylase producers.

Precisely why *more efficient starch conversion means lower blood sugar* is, as Minger suggests, rather mysterious, but a fact is a fact. So… what does this mean for you and me?

Well, I am not sure what it means for you, because I don't know you. But if you happen to be of Asian ancestry, and if you and your family eat rice regularly but don't suffer from being overweight — well, carry on, and count yourself lucky!

But I — and, perhaps, you — are not starch-adapted. Anyone whose ancestors are European, Native American, or from some ancestral group outside of Asia and the Middle East likely has a paltry cohort of AMY1 genes.

That means our blood sugar spikes to the stratosphere when we eat carbohydrates of any type.

Result: The familiar problems of insulin resistance, metabolic syndrome, pre-diabetes and ultimately Type 2 diabetes, all playing out against a background of growing overweight.

Bottom line: If you are an adult, you don't need sophisticated, expensive genetic testing to determine your AMY1 copy number. Far easier — and more accurate — is simply to do some dietary experimentation.

Limit carbohydrates for a month, following the precepts of my High-Fat, Real Food diet, and see what effect this regimen has on your weight.

If it does not budge, carbs are likely not your problem. But if the weight begins to fall off (I dropped 30 pounds in about two months when I got serious about this five years ago), then this is the solution you need to follow to keep obesity and its attendant health problems at bay.

Cheer up — it's not so bad. With time, you'll wonder why you craved those tasteless, starchy carbs when, instead, you could have enjoyed nutrient-dense and delicious meat, eggs, full-fat cheeses, and delicious vegetables. It is a diet you can grow to love — and you'll extend your life, giving you more time to love it!

Mr. Universe's Solution to Getting In and Out of the Kitchen in Record Time

You're Not Going to Find an Easier Low-Carb Lunch Than This…

I hate recipes.

Sure, you'll find a few as you flip through back issues of *Natural Health Response*, but note that five ingredients is pretty much my limit. These

"recipes" — if they can indeed be called that — are for basic dishes that are quick to make and allow the simple flavors of quality ingredients to shine through.

Which brings us to the world's simplest low-carb lunch.

I got this idea about four years ago from Dave Draper, the famed bodybuilder who won the Mr. Universe title way back in 1966. At age 73, Dave still lifts, writes, and looks damn good in a tight T-shirt. (He's also a very funny guy — check out his weekly column at DaveDraper.com.)

The bodybuilding community unscrewed the secrets of minimizing body fat about 50 years ago, well before the public at large got the memo.

To get the "cut" look their field requires, they had to find a way to minimize body fat — and the old mainstream advice to eat five–nine servings of "heart-healthy whole grains" daily was not it.

These guys were pioneer low-carbers. So Draper, for decades, has typically eaten a can or two of tuna for lunch. That's it.

Not fancy. Spartan, even. But it works.

I've made just a couple of changes to Draper's one-ingredient lunch dish. I am not a great fan of tuna, as this large predator fish is at the apex of the food chain. That means toxins, including mercury, accumulate in its tissues. I also find canned tuna rather dry to eat, because it lacks fat (as you'll recall from earlier newsletters, dietary fat does not drive body fat formation nearly as much as carbs do).

So I prefer canned wild salmon — in particular, this variety from Trader Joe's, which has a rich, fatty flavor quite close to that of fresh-caught fish:

And rather than one ingredient, I use two. At my home here in Arizona, I am fortunate to have a lemon tree in the backyard. So come lunchtime, I amble out and pluck a big lemon from the tree. Then I plop the salmon in a bowl, dowse it with lemon juice, and the first course of lunch is served.

The second course? Always a vegetable, nearly always raw (I've already had a big serving of cooked green veggies for breakfast. More often than not, it's one of my favorites — fresh, organic red bell pepper, one of the richest sources of vitamin C in the plant kingdom. I slice it into the now-empty bowl and the second lunch course is served.

On hard training days, I'll sometimes double up on the salmon, raw veggies, or both. Or if I'm still hungry, I'll follow up with a handful of macadamia nuts.

There you have it — three ingredients for lunch, one minute to prepare, one dish to wash, and a more satisfying, fat-fighting, nutrient-dense, and tasty lunch that you'd be hard-pressed to find.

Eating With the Paleo People

The Meals at This Paleo Conference Were Similar to the Ones I Prepare at Home… With One Exception

"Paleo" — the noun — is short for the Paleolithic Era, a period from roughly 2.5 million years ago to 10,000 years ago. It's the stretch of time, anthropologists say, when we evolved from primitive hominids to humans.

These days, Paleo — the adjective — is used to describe healthful lifestyle practices that are rooted in our evolution. For example, the "Paleo diet" takes its inspiration from the kinds of foods we ate as we transitioned to *homo sapiens*.

There are multiple variations, but generally, Paleo diets feature meats (including organs such as liver), fish, vegetables, fruits, and nuts and strictly avoid grains, sugar, and vegetable oil. Dairy foods occupy a gray area — fine if you can tolerate them, avoid them if you can't.

I've eaten a version of this diet for about six years now, but always in my home. I've never had anyone (aside from my wife, bless her) intentionally prepare a Paleo-style meal for me.

But from May 27–29, I spent three wonderful days at a conference called Paleo f(x), held annually in Austin, Texas, since 2010. It featured guest speakers; Paleo-themed vendors; and, perhaps best of all, a prepared Paleo breakfast and lunch each day.

I was encouraged to discover these meals were quite similar to the ones I'd been making for myself for years, with one exception — the Paleo f(x) lunches featured "meat bars."

These shrink-wrapped bars, with a taste and consistency somewhere between salami and jerky, are the Paleo alternative to carb-intensive "energy bars" that are actually just cookies and just as likely to cause weight gain.

The meat bars, made by Epic, were tasty, but at $2.30 per 1.5 ounce bar, they work out to $25 a pound — a little pricey for regular consumption. Good in a pinch, though. If you buy them in packs of 12 on Amazon, however, you can knock another 15% off the price. You have 13 different flavors to choose from.

The meals, meanwhile, were prepared by a local Paleo-themed restaurant called Picnik.

BOTTOM LINE

My first "officially Paleo" meals were tasty and satisfying. These were "strict" Paleo in that they did not even include dairy products such as

cheese or yogurt, which many Paleo people (myself included) tolerate well and consume regularly.

Use the ingredients you see here as templates for your own portable Paleo meals… and if you find yourself in central Texas, check out Picnik!

Fish Oil: Fughetaboutit?

Is Fish Oil a Good Polyunsaturated Fat… or Have We Been Fooled All Along?

If you're reading this right now, you've already gone through this month's cover story… and you're just sitting down after ceremoniously dumping all your bottles of polyunsaturated seed oil into the garbage… Right?

I ask because unless you implement what's revealed in this humble newsletter, your health won't improve. "Vegetable" oil doesn't care if you know a bunch about nutrition, and neither do your inflamed organs. Knowledge is only power when you apply it.

Here's some extra motivation. Picture this: Processed vegetable oils are manufactured from beans and seeds by vibrating, conveying, crushing, screwing, pressing, draining and washing with a solvent for 70 minutes, washing with sodium hydroxide for 20 minutes and then bleaching to lighten the color before steam-injecting for odor removal…

They might be Rube Goldberg's favorite food.

The odious number of processing steps required is a telltale sign that something is unfit for human consumption.

Going by this rule of thumb, it's easier to navigate the mishmash of oil choices we have.

Olive oil is certainly edible without complex factory processing, as long as it's extra virgin and cold-pressed — all that's needed, literally, is a hard squeeze.

SOUNDS FISHY

But here's a head-scratcher: What about fish oil? It's polyunsaturated, just like soybean and canola oils. Should we, as my New York City-based father's side of the family would put it, fughetaboutit?

Since it burst onto the nutritional supplement scene, every authority in alternative medicine has sung fish oil's praises for heart health. Then, in 2013 and 2014, the tables turned.

The media found they could grab more attention by reporting on stud-

ies suggesting fish oil failed to improve heart health or even increased the risk of prostate cancer. (Spoiler alert: The latter was due to horribly misinterpreting a study's data.)

Rather than complete a Michael Jackson-esque death spiral, fish oil reinvented itself. These days, it's back in the limelight for its mood-and cognitive-enhancing power. Considering its career length, you could call fish oil the Madonna of supplements.

EVIDENCE ON ITS SIDE

So is fish oil a good polyunsaturated oil, or have we been fooled all along?

Well, fish oil does go through factory processing — but the process is far simpler and free of toxic solvents. Ultimately, it's not much different than baking, an ancient "technology" that liquefies and extracts oil.

Plus, an analysis of 70 trials on fish oil shows it's great for blood pressure. Another showed it's still a champ for handling triglycerides. And yet another analysis of 15 trials found fish oil, especially one of its compounds called EPA, is great for your mood.

BOTTOM LINE

To avoid the potential danger of contamination with heavy metals, choose a fish oil that bears the term "molecularly distilled" on its packaging. This means it was evaporated in a vacuum and condensed on a cold surface, leaving impurities behind.

Also, choose a fish oil with as little oxidation as possible. Because that's not listed on the label, you would normally need to send a sample to a lab for testing! But don't worry. Laissez Faire's Living Well has you covered. We had our UltraOmega fish oil supplement tested by an independent laboratory for oxidation, and it came back with an A-plus score. Make sure to grab a supply at **research.lfb.org/research/video/lfb_ultraomega_0616**.

Then, if you haven't already, go dump that processed vegetable oil. It's bad for you, so you're not being wasteful. And if you're really feeling conflicted, just give it to a neighbor you despise.

BEST "BEFORE BED" FOODS

Sometimes the best meal of the day is the one you have right before you go to sleep. A lot of people will tell you that eating right before you call it a night is bad for you. But they're wrong. In fact, certain foods will actually help with digestion while you're asleep. Check out this list of healthy late night snack foods.

- White meat protein — If you have any chicken leftover in the fridge, don't feel guilty about warming up a plate of it. Your body digests this high protein food slowly. This allows your stomach to work while you're resting, so you won't wake up feeling starved.

- Cottage cheese — Another great protein source. Eat it plain and try to avoid adding any unneeded sugar.

- Low-carb protein shakes — If you have any creatine available, make yourself a smoothie and throw in some of the potent powder. This will sit well in your stomach and allow your body to process fats. It will also keep your metabolism running high throughout the night.

- Green vegetables — Nothing is better than getting a couple of servings of green right before bed. They're excellent sources of protein and they're not too high in calories.

- BONUS: Want to make sure you get a good night's sleep, even with your late night snack? Turn off the TV and make sure it stays off. Watching TV stimulates the brain and makes it more difficult to relax and fall asleep.

Throughout this report, we've told you about a number of foods commonly thought to be unhealthy. Feel free to add them to your list of "before bed" foods. They include: chocolate, coconut milk, grass-fed beef and butter, and whole eggs with the yolk.

THE ANTI-DIET FOODS

A diet is a great way to get healthy and shed excess pounds. But before you start stocking up on so-called "diet" foods, you need to be careful about what you buy. Just because a company says their food is good for your diet doesn't actually mean they're healthy. It's important to know what makes up a healthy diet, as opposed to just buying "diet" products. Here's a list of some foods to watch out for.

- Breakfast cereal — they're loaded with sugar and refined carbs. In other words, they're not good for you. These types of cereals have been known to cause insulin blood spikes, causing you to crash later in the day, most likely right as you're walking into the office.

- Agave nectar — many people will rave about the health benefits

of the nectar, but take that advice with a grain of salt. Agave nectar, on average, is about 70–90% fructose. Compare that to sugar, which is only 50% fructose. A diet that contains high levels of fructose could cause your body to develop a resistance to insulin.

- Whole-Wheat Bread — The term whole-wheat bread is just a marketing gimmick made to give the impression that their bread is healthier than its competitors. Whole-wheat bread is healthier than refined wheat, but that really doesn't mean much. If you want a healthy bread option, look for anything made with whole-grains, like Ezekial Bread. You can even get Ezekial flourless tortillas if the recipe calls for it.

- Granola — Unless it's homemade, stay away from the granola you find in stores. The stuff you find in the supermarket has added sugars and oils, things that ruin any healthy diet.

- Also, watch out for foods like low-fat yogurt, commercial salad dressing (even the low-fat kind), store-bought fruit juice, diet soda, organic processed food, trail mix, and gluten-free cakes and cookies. Here's a simple rule of thumb. If your great-grandmother wouldn't recognize it as food, don't eat it.

Losing weight is great… but there's an even better reason to cut back on sugar in your diet. It could be increasing your chance of developing certain cancers. In the words of Dr. William Campbell Douglass II, M.D., the man who's been called the "conscience of modern medicine,": Sugar is practically Miracle-Gro for many types of tumors. Additionally, cutting out sugary sodas could reduce your risk of developing diabetes by up to 83%.High fructose corn syrup, what soda companies in the U.S. use as a substitute for sugar, is the one carbohydrate you should avoid at all costs.

HOW NUTRITION "AUTHORITIES" GOT IT WRONG

Think of human history as a 100-yard football field. In the documentary The Perfect Human Diet, American scientist Dr. Loren Cordain explains that the first humans anatomically similar to us, known as homo erectus, appeared 2 million years ago at the zero yard line

Humans walked 99½ yards of that football field eating a high protein and animal diet. Agriculture began only 10,000 years ago. This means grains, legumes, and dairy products were introduced in a major way to our

diets only on the half-yard line!

And today? Sugars, wheat, and vegetable oil extracted from seeds such as soybeans and corn make up 70% of the calories we eat. These processed foods didn't become part of our diet until the 1900s, which puts them at the 0.001-yard line!

Since that time, life spans have lengthened due to the conquest of infectious disease, but our years of active, robust, productive health have done nothing but decline. As we continue to ignore the diets that kept us thriving and evolving throughout human history, the results become more severe.

The fact is now clearly established that the low-fat, high-carb diet is a nutritional nightmare. Just look at the soaring obesity and diabetes rates since 1980, when the federal government first began actively promoting this way of eating.

But if it's so wrong, why has it hung on? In a word, money. There is much more profit to be made by selling 4 cents worth of commodity wheat in a $4 box of Wheaties than there is in selling fresh meats and vegetables.

Grains — especially when propped up by federal subsidies — are cheap to grow, harvest, ship, store, and process. This fiscal advantage over meat, fruits, and vegetables is so compelling that the fact that grains are killing you is conveniently ignored!

If you want to get deep into conspiracy theories, you could explore the fact that high-profit-margin agribiz carbs send lots of customers to high-profit-margin medical-biz hospitals.

To be fair, the reality is that this was not entirely done for profit. Nina Teicholz, author of *The Big Fat Surprise,* argues that she found in her research that:

> On the whole, the mistakes of nutrition science could not primarily be pinned on the nefarious interests of Big Food. The source of our misguided dietary advice was in some ways more disturbing, since it seems to have been driven by experts at some of our most trusted institutions working toward what they believed to be the public good.

Whether intentional or accidental, it's still damaging to our health and wellness. And there's no doubt that this system, which keeps Americans fatter and sicker than anyone else in the developed world, is good for big business. That's why it will continue unless individuals like you get the facts and start to take control of your own diet and health.

What to Avoid

Carbohydrates

Carbohydrates are unhealthy when eaten in large quantities, despite the fact that various versions of the Agriculture Department's food pyramid have instructed us to eat six–11 servings of them per day.

Carbohydrates also hide in unexpected places. Fruit, for example, tends to be rich in carbohydrates. Many advocates of low-carb diets avoid fruits entirely. In my view, fruit can be beneficial, and it includes many of the vitamins and minerals we need. As long as you are eating a healthy diet filled with protein and fat, small amounts of fructose from low-sugar, cold-climate fruits such as berries or apples won't hurt.

The carbs to assiduously avoid are the ones in grains, and "whole" grains are generally no better than any others.

The problem with grains is that they are so ubiquitous in the American diet that they have become almost invisible. When the average person goes out for fast food, he worries about the "unhealthy" beef in his 3-ounce-cooked-weight burger and fails to process the fact that the huge bun of quick-digesting grain is the real health-destroyer in the meal. From cereal for breakfast to sandwiches for lunch to pasta for dinner, grains are the centerpiece of every meal — and we pay the price with our health and, ultimately, our lives.

Cutting out carbs has a number of wonderful health benefits. As I said in the beginning of this chapter, humans simply aren't genetically designed to eat grains. It's a new thing for us, one that our bodies aren't used to. As a result, it causes us to gain weight, develop type 2 diabetes, and have digestive issues (take a look at the new "epidemic" of celiac disease and gluten intolerance for evidence of that one).

Weight loss for people on a low-carb diet is considerably more effective than the standard diet recommended by the American Heart Association. By eliminating carbohydrates as an energy source, our bodies turn to our fat stores for fuel. By removing carbs from our diets, our bodies literally burn fat away.

Furthermore, the diet has been definitively proved beneficial for heart health. Eric Westman is a doctor and researcher at Duke University. He has performed about a dozen clinical trials on the effects of the Atkins diet (which famously cuts out carbs and encourages a high intake of fat and protein). His studies have shown that diets high in fat and low in carbohydrates have unparalleled advantages in the fight against obesity, heart

disease, blood pressure, and diabetes.

If you're experiencing any kind of joint pain, it could also be a result of carbohydrates in your diet.

Although it's a connection that's often overlooked, grains contain something called dietary lectins, which contribute to joint inflammation and even arthritis. Lectins are able to cross from the gastrointestinal tract into the rest of the body very easily.

There's actually a long history of joint pain being associated with gut inflammation, particularly in patients suffering from Crohn's disease and celiac disease. As a result, researchers have set out to determine whether or not a dietary change would impact not only the intestinal symptoms of those conditions, but also the arthritic symptoms.

In a study published by Cordain, Toohey, Smith, and Hickey in the *British Journal of Nutrition,* it was found that eliminating lectins not only helped patients suffering from these intestinal autoimmune diseases, but also relieved the joint pain that was associated with their conditions.

Other research published by the Department of Rheumatology at Karolinska University Hospital in Sweden found that removing gluten from the diet also helped to relieve symptoms of rheumatoid arthritis. Dietary changes are more frequently being prescribed as a remedy for joint pain, as science continues to prove that what you eat affects how you feel.

Vegetable Oils

The low-fat health craze also sparked the rise of vegetable oils. Researchers — well intentioned or otherwise — determined that traditional cooking fats like butter and lard were sure to lead to heart disease and should be replaced by "healthier" options like corn, soy, canola, and safflower oils.

The truth is vegetable oils are disastrous for your health, particularly when used for deep-frying. When heated, these polyunsaturated oils oxidize, rendering them highly inflammatory — and chronic, elevated, whole body inflammation underlies a host of diseases ranging from cancers to Alzheimer's to cardiovascular conditions. They also possess an unnatural amount of omega-6 fatty acid, which, even before oxidation, can also be dangerous in high quantities.

As bad as polyunsaturated oils can be, they become even more toxic when they are hydrogenated — that is, transformed into room-temperature solids through an industrial process that adds hydrogen atoms to alter the fat's chemical structure.

In her book *Death by Food Pyramid,* Denise Minger explains how Crisco, one of the first commercial hydrogenated oils, rose to unprecedented popularity just a few years after it was released in 1911. As Minger puts it:

Unknown to even the sharpest nutritionists of the day, Crisco had invited two killers into the American diet: trans fat resulting from partially hydrogenated oils and an astronomical intake of omega-6 fats — both now known to increase the risk of heart disease and cause inflammatory immune responses.

To make things worse, the USDA successfully blocked early papers and research warning against the use of hydrogenated oils. Studies were even manipulated so that they could be used as citations for the benefits of vegetable oils when really they increased mortality, cancer rates, and heart disease.

They were simply too profitable for food manufacturers — far cheaper to produce than lard, tallow, or butter; tasteless but palatable; and, because they are relatively inert, a great aid in helping to prolong the shelf life of baked goods and other processed foods. This happened well into the 1990s. It wasn't until 2006 that trans fat had to be listed as an ingredient on labels, and by that time, Americans had been ingesting them for decades.

THE BEST FATS AND OILS TO COOK WITH

Now that you know you should avoid refined corn, seed, and soy oils due to their high omega-6 content and likelihood of being made from GMOs, you may be wondering what the best fats and cooking oils are.

After all, those are the oils we've been raised using!

Here's a compilation of the safest, healthiest alternatives.

Saturated Fats

Saturated fats are among the best to cook with because they are not easily oxidized and are more shelf stable. Different fats have different smoke points at which they begin to oxidize. If you notice the fat/oil starting to smoke when it's being heated, or the butter turning dark brown, that means the fat is oxidizing. While you don't necessarily have to throw out this oil and start over, it's best to keep a close eye on your cooking temperature and prevent the oil from smoking whenever possible.

Clarified butter (also known as ghee) has one of the highest smoke points, making it an excellent choice for high-heat cooking. It has a much higher smoke point than butter because the lactose and proteins that are

easily burned have been removed. You can find clarified butter in most grocery stores or easily make it.

Coconut oil is another good saturated fat option for cooking. Nutiva makes a steam-refined version of coconut oil that has an even higher smoke point than regular coconut oil, making it ideal for high-heat cooking. An added benefit is that no chemicals are used in the refining process.

Olive Oil

Olive oil is best used raw (cold), and extra virgin olive oil really should never be heated. As with any oil, the more refined it becomes, the higher the smoke point (which is why vegetable oils have such high smoke points). If you have to do high-heat cooking and want or need to use olive oil, go with the extra-light version. It's not any lower in calories or fat — the light refers to the taste.

Vegetable Oils

Most vegetable oils should be avoided at all costs with one exception: avocado oil. If you have to deep-fry, it's really the best choice. Though it is relatively expensive, you already know you shouldn't be doing a whole lot of deep-frying anyway. However, you have to be sure to get the refined oil. Unrefined avocado oil does not have such a high smoke point. Though refined, the reason this is a better option than soy, corn, or canola oil is that you're avoiding GMOs.

The Benefits of Butter

Chances are you've been told for your entire life that it is absolutely vital to avoid "artery clogging" saturated fat. You know, the kind of fat that stays solid at room temperature, such as butter, lard, or beef or chicken fat. This is utterly, dangerously false. Eating natural saturated fats in abundance has been scientifically shown to be one of the best moves you can make for optimal brain, heart, liver, and lung function.

A seminal 2010 study established that "there is no significant evidence for concluding that dietary saturated fat is associated with an increased risk" of heart disease.

In other words, five decades of anti-saturated fat propaganda have lately been proved to be pure fiction.

Shortly after I read that, I started putting butter on my vegetables. I found that it promotes satiety — the long-lasting feeling of fullness and

satisfaction that has been almost entirely missing from the last five decades of high-carb, low-fat eating.

Getting calories from fat, not carbs, also keeps your blood levels of insulin under control — and insulin is what conducts fat into your cells for long-term storage.

Buttered vegetables also simply taste better. Try them just once and you'll realize that life's too short for the Calvinist trial of choking down plain, steamed, or boiled plants. Making veggies taste better assures you and your family will eat more of them, thereby gaining increased benefits of their nutrient density and fiber.

Finally, butter itself is a significant source of nutrition. Saturated fat creates strong, resilient brain tissue, nerves, and cell membranes, and helps synthesize important hormones — including testosterone. Good fats like this also help the body absorb the fat-soluble vitamins A, D, E, and K from the vegetables.

Other good, "fatty" sources of foods include dark chocolate, coconut milk, whole eggs with the yolk, and grass-fed beef.

Purchase high-quality butter (look for "grass fed" or "pasture raised" on the label) and apply it liberally to your vegetables

NOT ALL OLIVE OIL IS CREATED EQUAL

Long shunned for being too "fatty," olive oil's long list of heart-healthy benefits have come into the spotlight in recent years. It turns out that olive oil's monounsaturated fats are beneficial, having the ability to lower "bad" LDL cholesterol while raising levels of beneficial HDL cholesterol.

In addition to the positive effects these fats have on cholesterol levels, some studies have indicated that monounsaturated fats can benefit insulin levels and blood sugar control.

Let's take a look at the history. Olive oil has long been a staple of the so-called Mediterranean diet, featured in Italy and Greece. Those countries are home to some of the world's healthiest and longest living populations.

In the U.S., the ratio of centenarians (people who live until they're 100) is about one in 5,000. Sardinia, Italy, and Ikaros, Greece are two island populations known as "blue zones" where the percentage of people living healthily into their 100s is staggering by comparison.

Not only do Mediterranean people live longer, they seem to live better. The prevalence of Alzheimer's and dementia tends to be lower in Mediterranean countries. Scientists at the University of Louisiana College of

Pharmacy found that a component of olive oil, oleocanthal, helps with the removal of beta-amyloid in the brain. Beta-amyloid is a toxic protein that builds up in the brains of Alzheimer's patients. The researchers believe that oleocanthal could be critical in fighting that process.

Although their long lives are attributed to a combination of lifestyle and social habits, following a "Mediterranean diet" rich in vegetables and olive oil is common among these communities.

Chances are I'm not the first one to tell you the healthy secrets about olive oil. That's why I'm not here solely to encourage you to bump up the levels of olive oil in your diet — I'm here to give you tips on which olive oils to purchase.

Lower-quality olive oil can contain chemicals or even be mixed with cheaper vegetable or soybean oils.

It's important to purchase extra virgin olive oil, which is standardized for purity and made with natural methods.

Extra virgin olive oil is also the only type that is high in phenolic antioxidants, a huge part of what makes it so beneficial.

Unfortunately, that's easier said than done. ABC News reports that a 2011 study by the Olive Center at the University of California at Davis found that "73 percent of the five best-selling imported brands failed to meet the standards of taste and smell established for that grade of olive oil set by European regulators."

Since then, there has been continued fraud, making the "extra virgin" label not nearly as trustworthy as it should be.

The problem is rooted in lax labelling standards. "Extra virgin" is supposed to refer only to olive oil pressed from the olives mechanically. It should be pure, and never heated.

However, no organizations enforce those standards.

More often than not, the olive oil marked as extra virgin does not meet the production or taste requirements that have been set.

Some brands that have passed the University of California at Davis' testing have been California Olive Ranch, Lucero, Cobram Estate, Kirkland Organic, and Corto Olive.

Although there is no overarching inspection required for olive oil manufacturers, there are voluntary inspection agencies available: Both the USDA and the California Olive Oil Council (COOC) offer this service. Labels marked with their seals can be trusted.

Once you get used to high-quality olive oil, you'll be able to taste and

smell the difference. True extra virgin olive oil is very complex, almost bitter at times. Anything greasy, or that has a neutral taste, is not the real deal. You should be able to taste and smell layers of real olive flavors.

It also is sensitive to light, so most quality manufacturers will sell their olive oil in a darker bottle.

"Real" olive oil will be more expensive, which is one thing to keep in mind. The proper refining techniques are not cheap, but they're worth it if you want a quality product.

Take the time to add real, quality extra virgin olive oil to your diet and reap the benefits this healthy fat will add to your (hopefully lengthy!) life.

WORRYING ABOUT MERCURY IN SEAFOOD? DON'T.

Are you restricting your fish consumption because of the FDA's warnings about mercury contamination?

Any stockbroker knows fear is stronger than greed. So it's easy to persuade people to fear, and avoid, fish.

But perhaps we'd be smarter to be greedy for its benefits. Fish are packed with omega-3 fatty acids and other nutrients that support heart and brain health.

So what's the bottom line?

Since 2004, the FDA has recommended that children and pregnant women avoid swordfish, tilefish, shark and king mackerel, and eat no more than two meals a week of all other ocean fish in order to keep their consumption of methylmercury below dangerous levels.

It appears that after that warning, other people stopped eating fish as well. After all, if it's bad for fetuses and children, how healthy can it be for me?

Fish consumption in the U.S. dropped about 15 percent after its 2005 peak — probably as the FDA's warning percolated into popular culture.

But that advice is increasingly criticized as having been based on cherry-picked data and a poor understanding of the mechanisms at play.

One study that government officials relied heavily upon involved the Faroe Islands, a territory of Denmark, where residents suffered from severe mercury poisoning due to seafood consumption.

Pilot whale meat was the culprit — a source that everyone admits is uniquely high in mercury. However, since it's illegal to possess whale meat in the U.S. unless you are an aboriginal Alaskan, how relevant is that risk to the average American?

Yet caution with mercury is warranted. Some recent studies show

adverse effects of mercury on brains, especially developing brains, at levels many times lower than the 2004 guidelines.

So here's the good news. Evidence shows selenium, an essential mineral for human health, is likely the key to safely eating seafood.

One of the best dietary sources of selenium is fish. And researchers are uncovering a crucial relationship between selenium and mercury. It may help explain why eating pilot whale meat was such a disaster for the Faroe Islanders.

As it turns out, the higher the ratio of selenium to mercury in a fish, the safer it is to eat.

Why?

The reason mercury is a neurotoxin is not because mercury itself is dangerous, but because it keeps selenium from doing its job. Mercury naturally binds to selenium, preventing selenium from performing vital roles in the brain, including reducing oxidation from the brain's robust use of oxygen.

That's why selenium deficiency impairs thinking and memory. But as long as you are eating fish with substantially more selenium than mercury, you avoid a mercury-induced selenium deficit.

It should be noted that most adults have plentiful reserves of selenium from various dietary sources. Those most at risk from mercury from any source are children and developing fetuses.

Recent tests show that pilot whales have much higher levels of mercury than selenium, which could explain the (albeit subtle) neurological impact of mercury on Faroe Island children.

So skip the pilot-whale sashimi — probably not on your bucket list, anyway Instead, everyone — including pregnant women and children — should eat wild-caught salmon, sardines, herring and black cod at least twice a week, as these are excellent sources of omega-3 fats and relatively rich in selenium.

Indeed, research indicates that virtually all ocean fish sold in American stores contain enough selenium to neutralize the mercury they contain.

There are rumors that the FDA will readjust its guidelines in the near future to reflect this emerging data. Let's hope it does.

ARE YOU CONSUMING TOO MUCH SALT... OR NOT ENOUGH?

Everyone knows that Americans eat too much salt. The American Heart Association (AHA) recommends we each consume no more than 1,500

milligrams daily — a little over half a teaspoon. That's considerably less than half the average of 3,400 mg we actually take in.

There's only one problem with this story.

We don't eat too much salt, and the AHA is wrong. (Bad information from the same group that gave sugar-saturated Lucky Charms cereal its official heart-check seal of approval? Who would have guessed?!)

As it turns out, a 2014 international study of more than 100,000 people showed that those who consumed 3,000–6,000 mg of salt daily — statistically, that's likely you and me — had a lower risk of death from heart disease than those who consumed more or less than this amount.

That confirms a 2013 report from an expert committee of the Institute of Medicine, which looked at all studies on salt and health since 2005. It concluded there's no reason for anyone, even those with heart disease or diabetes, to aim for salt levels below 2,300 mg a day.

(By the way, the AHA stands by its discredited recommendation — possibly because the criteria for its heart-check certification, which companies pay a hefty fee to display, include low sodium levels.)

It's reassuring to realize that when it comes to salt, our tastes align with our needs.

Our need for salt, in fact, goes back a very long way.

Our bloodstreams are salty because our distant ancestors crawled out of the sea eons ago but didn't dare to leave essential minerals behind.

This means the human body is rather like a deep-sea diving suit. Just as the suit lets us bring breathing air underwater, our bodies allowed us to bring life-giving seawater onto land.

Given the trouble evolution has undergone to keep real salt swirling around and within every cell, it makes sense to replace the salt that's lost via perspiration and urination with the best kind possible.

Unfortunately, the salt that Americans typically consume today is a highly processed commodity consisting of just three elements: ultra-purified sodium chloride (NaCl), potassium iodide and anti-caking agents.

Real salt, meanwhile, is mined or gently evaporated from pure seawater and is a complex matrix of minerals, from calcium to zinc, with sodium chloride merely the most abundant.

How much, and what kinds, of additional minerals should natural salt contain to maximize the health benefits?

Good question… No one knows!

Here's the deal. The FDA sets what it calls a "reference intake" for 14

dietary minerals that they regard as necessary, but that's definitely too few. No one knows the full range of dietary minerals required for optimal human health, but the actual number could be over 50.

To pick just one example, the FDA has no requirement for boron, yet this mineral: can affect the function or composition of several body systems, including the brain, skeleton, and immune system, generally in a beneficial fashion.

These benefits include faster reaction times, improved thinking skills, and more.

Quality natural sea salts have an abundance of these not officially required but likely essential minerals in varying amounts, depending upon which seabed is their source.

A good rule of thumb is simply to choose a natural sea salt that is created from simple, low-tech evaporation and that has a very wide variety of mineral elements in it.

Whichever natural sea salt you choose, don't hesitate to use it on a wide variety of dishes. Let your taste buds, rather than the AHA, be your guide.

WHY THE CROCKPOT IS AWESOME

First things first: Nobody enjoys a perfectly grilled steak more than your correspondent. In fact, I plan to do serious damage to a grass-fed, grass-finished organic prime rib-eye this evening.

But… a nasty chemical fandango called the glycation reaction should give one pause before *regularly* chowing down on charred animal protein.

Glycation is the process of adding a carbohydrate to a protein via heat, rather than through the work of enzymes.

Numerous studies indicate that eating and metabolizing too many advanced glycation end products, or AGEs, raise the risk of a host of health conditions.

Although our bodies have a process that can eliminate AGEs, that capability can be overwhelmed by a high-AGE diet. As AGEs accumulate, oxidative stress ensues, which has been linked to the development or worsening of cardiovascular disease, chronic renal failure, and Type 2 diabetes.

AGEs are found in many foods, both raw and cooked, but they are particularly concentrated in animal proteins that have been grilled, roasted, broiled, deep-fried, or sauteed.

A good indicator of abundant AGEs is browning, known among food scientists (and educated cooks) as the Maillard reaction. It's also known as

the "flavor reaction," which gives some indication as to why it has gained such a hold over us.

Meats, fats, and sugary and highly processed foods tend to be naturally high in AGEs, and develop much higher amounts once they have been cooked with high, dry heat.

Another grilling byproduct is compounds called heterocyclic amines, or HCAs, which seem to cause even more health risks.

Well-done meat and fish grilled over an open flame (or cooked at or above 392 F) are consistently associated with the formation of HCAs, which have been linked to prostate, pancreatic, and colorectal cancer.

Yet animal-based protein and fat are vital to robust health, providing vitamins, minerals, and essential fatty acids that are difficult or impossible to get through plants alone.

Further, these foods keep blood sugar steady — the epidemic of obesity and diabetes since the early 1980s is largely due to the government's misguided advice to avoid these foods and chow down on low-fat carbs.

So it would be a great mistake to avoid beef, chicken, and fish simply because certain cooking methods have been shown to be problematic.

Fortunately, there are several delicious solutions:

- Make grilled, roasted, broiled, fried, or sauteed meat or fish an occasional treat. It's challenging to say exactly how often you may indulge, as this depends on many variables, but the bottom line is that you should not rely on these methods as the principal ways you heat meat or fish. When you do cook this way, use marinades that contain honey, acids (lemon juice, vinegar), and common herbs and spices like garlic, ginger, thyme, rosemary, turmeric, and red chili pepper. All have been shown to significantly reduce the formation of HCAs. Honey appears to be the only sugar with this property. Grilling indirectly (not over the flame) is also helpful

- Learn to prefer meat at the rare end of the spectrum. Most studies find positive cancer associations only with well-done meat. (The rib-eye I'll devour tonight will be a lovely red inside, after only a chaste kiss from the grill)

- If you love frequent grilling, do it with vegetables. Vegetables don't appear to develop HCAs, due to their low protein content, even when charred, and their AGE levels are relatively low compared with those of meat, regardless of cooking method

- Above all, learn to appreciate stews, soups, and other dishes made with "slow, wet" cooking techniques.

In my experience, a quality slow cooker — popularly known as a crockpot — is one of the most valuable kitchen appliances one can own (here's mine).

If you've had misadventures with these gadgets in the past, that's likely because grains were involved: Nine hours of wet heat invariably dissolve rice and pasta to gummy mush.

Stick with organic meat and vegetables covered in quality chicken, beef, or fish stock. Drop them in before work, and by dinnertime, you'll have soups, stews, and gumbos.

Leave the bones in, removing them just before serving, to get the additional advantage of calcium and cartilaginous compounds that are vital to bone and joint health.

Result: minimal AGEs and HCAs and maximal savory flavor and health benefits. Enjoy!

THREE REASONS TO DRINK MORE WATER

Everyone has heard the advice to drink eight 8-ounce glasses of water daily, for a total of 64 ounces.

Anonymous health rules like this are often suspect, but this is actually good advice.

The Institute of Medicine (IOM), the health arm of the National Academy of Sciences, has taken a hard look at the research and decided that an adequate daily intake for a healthy woman in a temperate climate is about 9 cups, or 72 ounces. Pretty close to the folklore.

But the IOM determined men need more — about 13 cups, or 104 ounces.

Given that the average American's water consumption is about 2.5 cups daily for both genders (with another 2 cups coming from soda, a truly terrible way to hydrate), these recommendations specify considerably more water than most men and women actually drink. That's why chronic low-level dehydration is extraordinarily common.

Here are three advantages you'll reap if you bring your water consumption closer to the suggested levels:

Better Physical Performance: During periods of intense exertion, as much as 10% of water weight can escape via perspiration. Yet the loss of as little as 2% of the body's water content can begin to degrade strength and

endurance. Result: increased fatigue, impaired motivation, and reduced ability to moderate core temperature.

Solution: Drink before, during, and after exercise — especially during hot and/or humid weather — for maximum physical output.

Improved Mood and Cognition: Even mild dehydration — defined as water loss equivalent to 1% of body weight — can degrade mental function.

This effect can be felt emotionally, as studies have shown fluid losses of between 1-2% of body weight can worsen mood and boost anxiety.

It can also register cognitively, as similar losses have been shown to impair concentration and memory.

Solution: Hydrate well before an academic test, presentation, or any undertaking in which you must be mentally positive and focused.

Weight Loss: Drinking enough water can promote weight loss in two ways.

It can boost satiety — the "I'm full" sensation that signals you to stop eating. And it can increase your base metabolic rate, allowing you to burn more calories effortlessly.

In one study, drinking about 2 cups of water boosted metabolism by up to 30% for about 90 minutes.

Solution: If your goal is weight loss, drink water about 30 minutes before meals, and make sure the water is cold. Research indicates that much of water's ability to increase caloric burn comes from the metabolic "work" required to raise cold water to body temperature.

So how do you bring more water into your life?

In my view, it's quite simple: Purchase a few 40-ounce stainless-steel bottles with screw-on lids (I like this one).

Every morning, fill it with water, tuck in in your briefcase, and head out to slay the dragon.

Keep it at your desk (and you do have a stand-up desk, right?), drink from it often, and refill it as needed — for me, that's usually required at around 2 p.m.

By the end of the day, you'll have consumed a solid 80 ounces of water.

What about other beverages? For the sake of simplicity, don't count them. While your day may include the odd coffee or alcoholic refreshment, the diuretic effect of caffeine or alcohol partially or fully cancels their ability to hydrate.

Relatively weak green iced tea — which I make at home, carry in my

stainless bottles, and drink some days rather than water — is the only non water beverage that should count toward your daily water intake. Its diuretic effect is mild, and it offers other health benefits, including potent antioxidants known as catechins.

As for insuring the quality of the water you drink or make into tea — I'll discuss filtration, mineralization, carbonation, and other crucial factors in an upcoming installment. For now, I'll simply suggest that the water you drink should come from a quality carbon or reverse osmosis filtration system.

Drink more water! It's among the simplest, cheapest, and easiest ways to realize an immediate health benefit.

Have a Drink to Your Health

So What Exactly is Moderate Drinking?

A "unit" of alcohol is defined as 12 ounces of beer, 5 ounces of wine, or 1.5 ounces of hard liquor. The generally accepted definition of moderate drinking is two units daily for men, one for women.

I endorse these guidelines and stick to them religiously myself. On any given night, I'll have zero, one, or two drinks. *Never* more.

Now, allow me to be quite clear. If you cannot manage to drink moderately, it's far healthier to be a teetotaler than an alcoholic. Excessive drinking has proven, serious health risks, including increased incidence of liver disease and several forms of cancer. Alcoholism ruins lives, and sobriety is mandatory for *anyone* at risk of drinking irresponsibly.

But if you have the ability to stop when you choose, I firmly believe judicious tippling can be a fundamental part of your healthy lifestyle.

In my experience, along with cardiovascular benefits, I've found that one of the great virtues of an alcoholic beverage is that it can be a substitute "treat" that replaces high-carbohydrate desserts. (Contrary to popular belief, alcohol itself is not "fattening," despite a high caloric content.)

So I do almost all of my drinking very slowly, sipping wine, beer, or a scotch rocks in the pleasant, quiet hours after dinner. It's a habit I picked up from an authoritative source — my 88-year-old uncle, who remains both slender and sharp as a tack.

Here's to a healthy holiday!

Could *ALL* Alcohol Be Good For You?

By now, you've probably heard about the health benefits of drinking red wine. Flavonoids in red wine are antioxidants, and have an anti-inflammatory effect on the body. Red wine also contains resveratrol, which protects blood vessels by reducing LDL ("bad") cholesterol, and also plays a role in preventing blood clots.

But other studies show that it's okay if red wine isn't your flavor of choice. The Mayo Clinic explains that studies have shown that moderate amounts of any type of alcoholic beverage can help your heart — wine, beer, or liquor. According to them, moderate alcohol consumption:

- "Raises high-density lipoprotein (HDL) cholesterol, the "good" cholesterol
- Reduces the formation of blood clots
- Helps prevent artery damage caused by high levels of low-density lipoprotein (LDL) cholesterol, the "bad" cholesterol
- Produces changes in blood pressure"

Another study shows that " A series of studies using animal models have shown that beer may prevent carcinogenesis and osteoporosis; beer provides plasma with significant protection from oxidative stress; and isohumulones, the bitter substances derived from hops, may prevent and improve obesity and type-2 diabetes, improve lipid metabolism, and suppress atherosclerosis."

An article from Harvard's School of Public Health titled "IS Wine Fine, or Beer Better?" found that moderate drinkers were 30 to 35 percent less likely to suffer a heart attack than non-drinkers, and that this reduction occurred in men drinking beer, wine, or spirits.

Beer is relatively nutritious, as well, containing more protein and B vitamins than wine does. A Dutch study from the TNO Nutrition and Food Research Institute showed that beer drinkers had twice as much vitamin B6 in their blood than wine drinkers. It also contains fiber and carbohydrates, which can help keep your digestive system in balance.

Now, keep in mind that the studies are meant for **moderate** consumption. That's usually defined as one drink per day for women, and two for men. Some doctors are hesitant to recommend alcohol consumption because of the dangers that occur when you drink too much. If you have tendencies toward alcoholism, it is vital to abstain entirely. However, if you can keep your drinking to a safe and moderate level, it can really help your health.

SCIENCE IS ON THE SIDE OF MODERATE DRINKING

During the holiday season, alcohol tends to flow more freely than at other times of the year. Is this a problem?

Not necessarily — in fact, as long as you maintain control, drinking can be decidedly beneficial.

Most people have heard that moderate drinking may offer health benefits, but in my experience, most people don't realize.

1. Just how overwhelming the evidence really is.
2. That it applies to all kinds of alcoholic beverages — not,as is often stated, wine only.

So let's turn to the Harvard School of Public Health Nutrition Source, perhaps the most authoritative collection of scientific facts in the world of nutrition science.

Here, we discover that "more than 100 prospective studies" show that moderate drinking cuts the risk of all kinds of heart disease — and all deaths from heart disease — by 25–40%.

Let's offer a toast, my friends, to this extraordinary conclusion. This is a huge amount of data pointing to a huge margin of risk reduction.

Take it from a guy who swims in health studies day in and day out: You'll be hard-pressed to find a more persuasive, consistent body of evidence endorsing any other nutrition or lifestyle practice supporting cardiovascular health.

Black Gold Benefits

Antioxidants in Coffee May Help Protect Against a Host of Diseases

I've always loved coffee.

After my first cup, everything seems like a great idea. After the second, I may actually have a great idea.

Am I addicted? Almost certainly. Are all addictions bad?

No. This one is a case in point.

Research is increasingly lining up behind the benefits of coffee — although I have to warn against confusing correlation with causation. It's hard to know precisely whether drinking coffee actually causes the health benefits these studies reveal or whether people who drink coffee tend to do other healthy things that cause the benefits.

But the results sure are interesting, nonetheless.

For example, people who drink coffee also have a significantly lower risk of developing Type 2 diabetes, depression, nonalcoholic fatty liver disease, cirrhosis of the liver, skin cancer (but only if you're a woman), Parkinson's disease, and even Alzheimer's.

And there is tantalizing evidence that coffee drinking is associated with living longer.

It's equally interesting that the sweet spot for these effects is four–five cups of coffee a day — in other words, somewhere north of moderation, typically described as two cups daily.

According to a very recent Chinese study, caffeic acid — an organic compound in coffee that, despite the name, is unrelated to caffeine — might be at least part of the reason. It has potent antioxidant and anti-inflammatory activity and inhibits a protein that appears to contribute to Type 2 diabetes.

Good news for decaf drinkers — the percentage of caffeic acid actually increases post-decaffeination.

And the high level of antioxidants in coffee (even more, ounce for ounce, than found in the vaunted blueberry), as well as caffeine's stimulation of certain neurotransmitters, may be the reason behind coffee's association with lowered risk of depression and suicide.

Those antioxidants, and their ability to fight inflammation, may help protect against a host of diseases, including cardiovascular disease, arthritis, and cancer.

There's another potential benefit, this time with respect to your workout. When you drink coffee, the caffeine increases adrenaline, which in turn releases fatty acids from your body's fat reserves. This is responsible for that wonderful little jolt of energy.

It's a perfect time to get some exercise and burn off that released fat — before your blood-circulating insulin stuffs it back into your cells. Go for a walk, hop on your bike, weed the veggies, hit the gym.

And — but coffee drinkers already knew this one — there is firm evidence that caffeine can improve mood, reaction time, memory, and all-around cognitive function too.

Coffee isn't for everyone. Caffeine intolerance, which appears to have a genetic basis, kicks off myriad nasty symptoms, from anxiety to tremors, insomnia, and an upset stomach. And pregnant women have been officially advised to stay off the joe since it can adversely affect the fetus.

But if you're caffeine tolerant, enjoy your four or five cups a day. (Re-

member — we're talking actual liquid-measure cups here, not four or five towering "venti" containers from you-know-where, each of which totals 2.5 cups.) They may well help ward off disease and increase your lifespan.

At the very least, you'll enjoy the measure of your days considerably more.

Coffee the Healthy Israeli Way

A Delicious, Middle Eastern Twist That Enhances Coffee's Health Benefits

Theoretically, life without coffee is possible… but why take the chance?

Seriously, coffee love goes deep in my family, and I got the craving from both sides. As a kid in the 1960s, my mother had to physically drag me away from the coffee-grinding machine at the local market — I used to stick my head in the bin and bliss out on the intoxicating smell.

So I've been delighted by research establishing that coffee consumption is associated with longer life. For men, six cups daily drops risk of death by a whopping 10 percent. That's probably due to java's abundant antioxidant compounds and/or its ability to lower blood sugar.

But some people find that coffee upsets their stomach. If you are one of them, I've got a stomach-soothing solution that also offers wonderful flavor and the possibility of extra health benefits as well.

IT'S ISRAELI COFFEE

Also called Turkish coffee (this is a sore point in Turkey-Israel relations, so use the local term if you are actually in either country), it's coffee plus cardamom in a distinctively fine grind.

Cardamom is known in India as "the queen of spices" for its refreshing flavor and health benefits — research has established multiple benefits, including lowering blood pressure.

Also, cardamom's alkalinity is the perfect complement to coffee's well-known acidity, rendering coffee drinkable for people who otherwise literally cannot stomach java.

There are at least two ways to make Israeli coffee:

The simple way: Buy it pre-ground from Amazon and make it according to package directions on the back.

This packaged Holyland coffee and cardamom are finely ground, almost to a powder. Just boil it, at roughly a tablespoon per cup, for two minutes.

Then it goes straight into the mug, leaving a characteristic grounds "ring" around the top and a mud-like residue at the bottom:

The slightly harder way: Just purchase **decorticated (hulled) organic cardamom seeds** from your local natural foods store or online, grind them as you would coffee beans and mix with ground coffee in a ratio of one part ground cardamom to eight parts ground coffee.

Then make your coffee as you usually do.

BOTTOM LINE

When I make coffee at home, I now routinely add a tablespoon of ground cardamom to the half-cup of ground coffee I use to make my typical eight-cup pot.

I like the taste and find the combination to be easier on my stomach, a modest mood-elevator and generally well worth the small extra effort. Give it a try!

To Juice or Not To Juice?

How Juicing Stacks up Against Consuming Fruits and Vegetables Whole

Juicing is a process that extracts the juices from fresh fruits and vegetables, usually stripping away most of the solid matter, like seeds and pulp.

The resulting liquid contains most of the vitamins, minerals, and antioxidants naturally present in the whole fruit or vegetable.

JUICING METHODS

Juicing methods vary, from squeezing fruit by hand to the more commonly used motor-driven juicers. The most common types of juicers are:

- Centrifugal juicers: These juicers grind fruits and vegetables into pulp through a high-speed spinning action
- Cold-press juicers: Also called masticating juicers, these crush and press fruits and vegetables much more slowly to get as much juice as possible.
- Cold-press juicers don't produce heat, so they do not cause the breakdown of beneficial enzymes and nutrients thought to happen with centrifugal juicers.

PURPOSE OF JUICING

Juicing is generally used for two different purposes:

- For cleansing or detox: Solid food is eliminated and only juice is consumed as a way to cleanse your body of toxins. Juice cleanses range from three days to several weeks in length
- To supplement a normal diet: Fresh juice can be used as a handy supplement to your daily diet, increasing nutrient intake from fruits and vegetables that you wouldn't otherwise consume.

JUICE IS AN EASY WAY TO GET LOTS OF NUTRIENTS

Many people don't get enough nutrients from their diet alone. Nutrient levels in the foods we eat are much lower than they used to be, largely due to processing methods and the long time it takes to get produce from the field to the supermarket.

"Many people don't get enough nutrients from their diet alone."

Polluted environments and high-stress levels can also increase our requirements for certain nutrients.

Fruits and vegetables are full of vitamins, minerals, antioxidants, and plant compounds that may protect against disease.

If you find it difficult then to get the recommended amount of fruits and vegetables into your diet each day, juicing can be a convenient way to increase your intake.

One study found that supplementing mixed fruit and vegetable juice over 14 weeks improved participants' nutrient levels for beta-carotene, vitamin C, vitamin E, selenium, and folate.

While a review of 22 studies found that drinking juice made from fresh fruits and vegetables or blended powder concentrate improved folate and antioxidant levels, including beta-carotene, vitamin C, and vitamin E.

WHOLE PRODUCE PROTECTS AGAINST DISEASE, BUT STUDIES ON JUICE ARE DISAPPOINTING

There's plenty of evidence linking whole fruits and vegetables to reduced risk of disease, but studies for fruit and vegetable juices are harder to find.

"If you find it difficult to get the recommended amount of fruits and vegetables into your diet, juicing can be a convenient way to increase your intake."

One review reported that the health benefits of fruits and vegetables

may be due to antioxidants, rather than fiber. If this is true, then juice may provide comparable health benefits to whole produce.

However, there is only weak evidence that pure fruit and vegetable juices can help fight cancer. There is a lack of human data, and other findings are inconsistent.

FRUITS AND VEGGIES ARE BEST CONSUMED WHOLE

Juicing advocates often claim that drinking juice is better than eating whole fruits and vegetables.

They justify this by saying that removing the fiber makes nutrients easier to absorb. However, there isn't any scientific research to support this.

In fact, you may actually need the fiber content of the fruit or vegetable to experience the plant's full health benefits.

For example, important antioxidants that are naturally bound to plant fibers are lost in the juicing process. These may play an important role in the health benefits of whole fruits and vegetables.

TAKE-HOME MESSAGE

Fresh juices contain important vitamins and antioxidants that can benefit your health. However, fruits and vegetables are still healthiest and most nutritious when consumed whole.

The High-Fat, Real-Food Diet

How to Eat for Optimal Energy, Weight Control, and Overall Health

I've spent nearly *20 years* examining the debate between schools of thought regarding the optimal diet for human health — a relative *eternity* in my deadline-driven career as a journalist for *The Washington Post* and *Discover* magazine.

This long, intense study has utterly persuaded me that there *is* a best way to eat for the vast majority of human beings.

That way is a high-fat, moderate-protein, low-carbohydrate diet of fresh, unprocessed foods.

Or for short, the "High-Fat, Real-Food" diet.

EATING THE OLD WAY

The reason is found in evolution.

The fundamental nutrition fact evolution tells us is this: If people have been eating a particular kind of food for a very long time, we have co-evolved with that food, and it's likely healthful.

Conversely, if people are eating new foods — or avoiding whole categories of old ones — it's much less likely that this will promote health.

Consider veganism, for example. It's the practice of avoiding all animal-derived foods — no meat, no eggs, no dairy.

It's a new way for humans to eat. The term "vegan" was invented only in 1944. There are no records — at least, none that I've been able to locate after intensive search — of any ancient culture that ate this way.

This means the diet is profoundly out of sync with our evolutionary heritage, and to the extent that it "works" at all, it depends on a complex collection of synthetic vitamins and fatty acids to avoid deficiencies.

Conversely, there are dozens of very old human cultures on the opposite side of this spectrum — ones that consume animal foods almost exclusively and have done so for millennia.

Consider this summary of diets favored by pre-Columbian American Indians, which varied by locality, but:

[A]ll were based on animal foods of every type and description, not only large game like deer, buffalo, wild sheep and goat, antelope, moose, elk, caribou, bear, and peccary, but also small animals such as beaver, rabbit, squirrel, skunk, muskrat, and raccoon; reptiles including snakes, lizards, turtles, and alligators; fish and shellfish; wild birds including ducks and geese; sea mammals (for Indians living in coastal areas); insects including locust, spiders, and lice; and dogs.

Similarly, the Inuit of the Canadian Arctic thrived on seal, fish, walrus, and whale. The Russian Arctic's Chukchi favored caribou meat and fish. The Masai, Samburu, and Rendille of East Africa ate milk and meat. The nomads of the Mongolian steppes ate mostly meat and dairy.

Explorers and physicians who have studied such groups report they were almost universally free of the diseases of modern civilization, such as cardiovascular conditions, Alzheimer's disease, and cancer.

NOT EXACTLY "PALEO"

So did these people eat "paleo" diets, now very much in fashion?

Not exactly.

I give the paleo diet movement great credit for moving the focus where it belongs: onto evolution.

"Paleo" refers to the Paleolithic Era, the period from roughly 2.6 million years ago to 10,000 years ago, when agriculture began.

Paleo nutrition's basic premise, which is absolutely correct, is that 10,000 years — a mere 500 human generations — is not nearly enough time for human beings to evolve to thrive on the new, carbohydrate-intensive foods cranked out by modern commodity agriculture.

Now, if your ancestors are from the "Fertile Crescent" in modern-day southern Iraq, Syria, Lebanon, Jordan, Israel, and northern Egypt, you may be very *slightly* adapted to successful grain consumption, since agriculture was introduced there circa 8,000 B.C.

The rest of us — not even that much. Bottom line: We're all a very short distance from our hunter-gatherer roots.

CAN'T SHAKE THE FEAR OF FAT

But often in what might be called "popular paleo" that's proliferated on the Internet and pop-culture books, many paleo "experts" are still dietary-fat-phobic.

They recommend lean meats exclusively from animal muscle (or worse, fat-free meat substitutes), sparing use of fats of any kind, plenty of beans and grains, and abundant fruits.

Even paleo adherents who claim to be "pro-fat" seldom go far enough — a little extra olive oil drizzled on the Caesar salad's skinless chicken breasts is as radical as they'll get.

So it's important to recognize that traditional cultures typically went to great lengths to render, hoard, and eat fat from the animals they ate. Returning to American Indian practices, animals were hunted in spring, when fat stores were most abundant. Then:

This fat was saved, sometimes by rendering, stored in the bladder or large intestine, and consumed with dried or smoked lean meat. Used in this way, fat contributed almost 80% of total calories in the diets of the northern Indians.

The result of such fat-intensive diets, according to the Westerners who encountered these cultures, was a level of mental and physical vigor virtually never seen among typical members of more civilized cultures.

As a physician who lived among the Eskimos and Indians of Alaska in the 1930s noted, in his 36 years of contact with them he "had never seen a case of malignant disease among the truly primitive Eskimos and Indians, although it frequently occurs when they become modernized."

This is not to say that natives always had long life spans. But they tend-

ed to die from infectious disease or violence — those who avoided such hazards lived to ripe, healthy old ages.

So our task today is to combine the blessings of modern life — infectious disease control and a high degree of physical safety — with the wisdom of ancient diets.

Together, they are a potent prescription for robust health.

Why a High-Fat, Real-Food Diet Works

The Importance of Keeping Your Insulin and Blood Sugar Levels Low

The reason animal protein and fat are so healthful has to do with insulin, the body's master metabolic hormone. Diets high in sugar and grains — and, to a lesser extent, even fruit — spike blood levels of insulin.

Insulin pushes glucose — the sugar in blood — into cells for both energy production and long-term storage.

Insulin also "tells" fat cells to grow and to hang onto the fat that they carry. So when insulin levels remain high, stored fat remains locked inside fat cells. Eventually, cells become so stuffed that they won't allow insulin inside them anymore.

This condition, called impaired glucose tolerance, or prediabetes, now afflicts *one in three adult Americans*. It can quickly progress to Type 2 diabetes, which one in 11 Americans now has.

And *that* can progress to a slow, painful death.

The solution is straightforward. Eating fewer carbs and more fat lowers blood sugar and insulin levels. When insulin drops, the body can easily burn fat for fuel. The risk of obesity, diabetes, cardiovascular disease, even cancers, falls dramatically.

Even better, high-fat, moderate-protein, low-carb diets provide satiety — the feeling of fullness. Most Americans on high-carb diets are ravenous a good deal of the time. Eating more fat and fewer carbs makes appetite easy to manage.

And weight loss is effortless. I dropped 25 pounds in two months when I made this shift six years ago. Then my weight settled into an ideal range and has stayed there ever since, virtually without effort.

BUT WON'T EATING MORE SATURATED FAT KILL ME?

You'll need to pardon me here. This is where I start to get angry.

The chief mainstream objection to high-saturated-fat diets is that they cause arterial blockage. The phrase *artery-clogging saturated fat* garners 49,600 hits on Google, so this notion is alive and well.

But it's simply *not true*. It never was.

If you were feeling charitable, you could call this a 50-year-old mistake — one that, through sheer bad luck, created a nation of carb addicts ravaged by the metabolic diseases I just mentioned.

But if you prefer the naked truth, you could also call it a lie.

It was perpetrated by a charismatic, ego-driven, mid-20th-century nutrition researcher named Ancel Keys. He cherry-picked data from seven countries to "prove" that eating high levels of saturated fat boosted heart disease risk.

He conveniently ignored data from 15 other countries that bucked that trend.

Had he, like any good scientist, used all available data (including from France, which to this day has Europe's *highest saturated fat consumption* levels and the *lowest cardiovascular death rate*), he would have seen that there is *no trend* linking saturated fat consumption with heart disease — a fact finally confirmed by a landmark 2010 meta-analysis.

While it's true that saturated fats raise total cholesterol levels, what they actually do is raise the HDL (good) cholesterol and convert LDL (bad) cholesterol from small, dense particles, which are indeed very bad, into larger particles that are harmless.

Result — no elevated heart disease risk.

I'm confident that as these studies become more sophisticated, they will show saturated fat consumption — especially combined with low carb intake — significantly drops heart disease risk.

GO WHOLE HOG?

So should we eat animal foods exclusively?

No. Cultures change, as do ecosystems. Few people today have the desire or the resources to pursue such a diet, nor could the planet sustain it for 7.1 billion inhabitants.

These diets require a steady supply of animals raised on appropriate, pesticide-free diets — grass-fed beef, mixed-forest-grazed pork, etc. Such foods are both expensive and difficult to find, though consumer demand is making them more affordable and ubiquitous.

Finally, successful animal-exclusive diets require regularly consuming

organ meats such as liver and brains, which contain vitamins, minerals, and other nutrients not found in muscle tissue (for example, beef liver and pancreas are rich sources of vitamin C). Most modern Americans have lost their taste for such foods.

So while I am staking out the importance of animal-based foods here, I am actually a huge advocate for eating vegetables — and to a lesser extent, fruits — in abundance.

A great deal of research has established that cultures that consume large amounts of vegetables, especially dark-green leafy varieties, enjoy long, healthy lives. Nine standard servings per day is not excessive!

Keeping all of these considerations in mind, what does my optimal human diet look like? I turn to that next.

What Foods to Eat… What Foods to Avoid

Your Simple Guide to a Lifetime of Health

Let's start by considering what not to eat.

WHAT TO AVOID

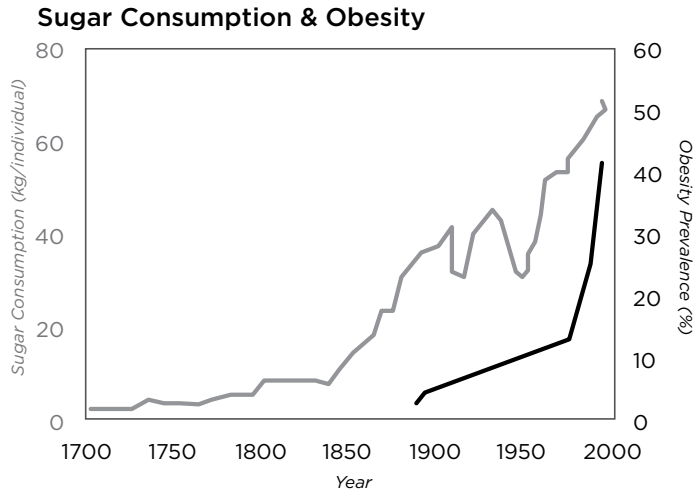
Sugar. Sugar is addictive,6 highly lipogenic (fat-forming), and a leading cause of obesity, Type 2 diabetes, and cardiovascular disease.

The human body has not evolved to handle the metabolic and hormonal imbalances kicked off by the consumption of massive quantities of isolated, concentrated sugars. I refer here not only to sucrose (table sugar), but also to "label ingredients" such as (deep breath) cane juice, dextrin, maltodextrin, dextran, barley malt, beet sugar, corn syrup, corn syrup solids, corn sugar, brown sugar, date sugar, malt syrup, diastase, diastatic malt, fruit juice, fruit juice concentrate, turbinado, sorghum syrup, and God knows what else caffeinated marketers are working overtime to concoct deceptive synonyms for.

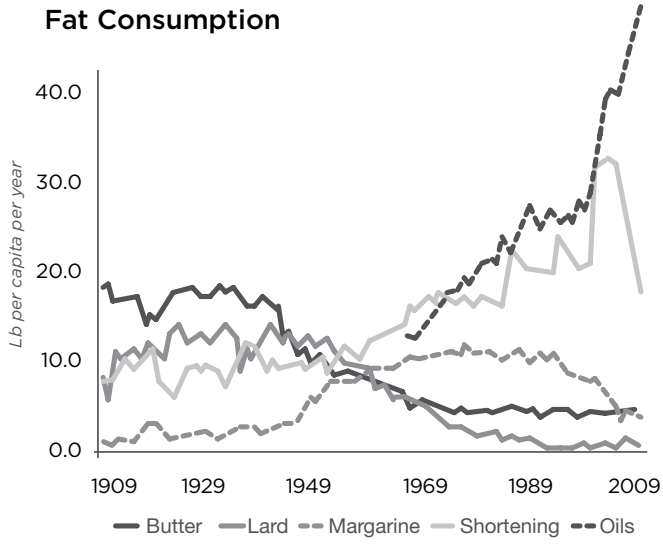
If, heaven help you, you consume the annual intake of added sugar of the average American, a whopping 100 pounds, then there is no single dietary action you can take that will improve your health more than slashing this to, say, the roughly 5 pounds enjoyed by the average American colonist.

Grains. Ones that contain gluten such as wheat, spelt, barley, and rye are the most problematic and tend to promote leaky gut syndromes (literally punching microscopic holes in your intestines, allowing oversized particles to escape and kick off whole-body inflammation). Celiac disease

is a diagnosable condition at the far end of a spectrum on which, my research indicates, virtually everyone can be found. In other words, we'd all be better off avoiding grains. (Name one essential nutrient that can be obtained only from grains and I'll change my tune — but it's a sucker's bet, because there are none.)



Source: Johnson RJ, et al. Potential role of sugar… The American Journal of Clinical Nutrition, 2007.



Source: Dr. Stephan Guyenet. The American Diet. 2012.

Seed Oils. Polyunsaturated oils such as corn, canola, and soybean oil are the golden, liquid-at-room-temperature oils nutritionists have told us to eat for heart health. Those nutritionists are wrong. Such oils are extracted under high heat using toxic solvents and are profoundly unnatural. They are bad enough when consumed raw, but become denatured, oxidized, and highly inflammatory when heated, especially over long periods as in a fast-food restaurant's deep-fat fryer. Unfortunately, consumption of these seed oils (noted as "oils" in the chart below) has skyrocketed.

Trans Fats. These are the seed oils above, modified with hydrogen to become thick and chemically stable — a transformation that also raises their cardiovascular risk. They are becoming rarer (note the lovely drop in "shortening" in the "Fat Consumption" chart), but are still found in some processed foods.

Artificial Sweeteners. Chemical, nonnutritive sweeteners such as aspartame drive obesity at levels comparable to caloric sweeteners, and some are suspected carcinogens.

FINE FOR THE ACTIVE — THE SEDENTARY SHOULD AVOID

Tubers. Potatoes and, especially, sweet potatoes (rich in vitamin A), baked, boiled or lightly sautéed in a saturated fat such as coconut oil, are good choices for people who are active and don't need to reduce their weight.

Nuts and Seeds. Almonds, walnuts, hazelnuts, cashews, and so on are rich in nutrients, but can also be difficult to digest and contain an anti-nutrient called phytic acid that can interfere with mineral absorption. Macadamia nuts, if you can afford them, are the best choice here — high in fat, low in phytic acid.

Gluten-Free Grains. Rice and oats, as typically eaten, have two advantages — they are relatively easy to digest, and the grains are intact (not milled into flour) which slows absorption and keeps blood sugar relatively stable. But note — *no one needs to eat these foods, and they are easy to overconsume*. Active people can enjoy them in moderation.

FINE FOR THE LACTOSE-TOLERANT — THE REST SHOULD AVOID

Dairy. Full-fat dairy foods are highly nutritious for those whose digestive systems can process the milk sugar known as lactose. Generally, fermented dairy such as cheese, yogurt, and kefir is easier to tolerate digestively and

offers more bioavailable nutrients than do milk and uncultured cream.

Seek products from grass-fed animals, as these are rich in vitamin K2, a nutrient that's vital for bone and cardiovascular health — high K2 consumption is associated with longevity. Put butter from grass-fed cows on your vegetables!

ENJOY IN ABUNDANCE

Make these foods the foundation of your daily diet:

Fats and Oils. A big one. Essentially, everything Americans have been told about dietary fat for the last 50 years is the precise opposite of what unbiased science actually shows.

In brief, there are three kinds of fat:

- *Saturated* — the kind that stays solid at room temperature, such as butter, lard, and coconut oil
- *Monounsaturated* — oils that are thick and viscous at room temperature; olive oil is by far the best known
- *Polyunsaturated* — thin oil extracted from seeds via high pressure and solvents, such as corn, canola, soy, and safflower oils.

Despite what you've been told, you are *optimized* to consume saturated fat (or, more precisely, fats with a high saturated-fat fraction — dietary fats all have varying proportions of polyunsaturated, monounsaturated, and saturated fats).

Your ancestors gorged on saturated fat from animals. Your body loves it so much that it *manufactures* sat-fat from carbohydrates and stores it around your waist, where it waits patiently to save your life during the next famine.

Saturated fat does not "clog" arteries. Arterial blockages come from inflammation largely caused by overconsumption of sugar and oxidized polyunsaturated oils. Eating more sat-fat and less poly-fat is probably the best swap you can make to improve your cardiovascular health.

Saturated fat also does not make you fat, especially in the context of a low-carb diet. It is more calorically dense than carbohydrates, but also metabolized in ways that don't spike the fat-driver, insulin.

Rediscover animal fats for cooking, and lean toward fatty cuts of organic meat.

As for olive oil — it's a good choice for raw applications, such as a salad dressing. For heating applications, stick with animal fats or coconut oil,

which are chemically stable at high heat.

Vegetables. Emphasize leafy greens such as kale and collards. They are nutrient dense, nonlipogenic, and excellent sources of folate and calcium. But branch out as well! Eating vegetables across the color spectrum, and in season for maximum vitamin retention, brings you a healthful variety of nutrients:

- Yellow and orange vegetables including carrots and sweet potatoes are rich in anti-inflammatory carotenoids
- Red vegetables like tomatoes and red sweet peppers (technically, both are fruits) provide anti-carcinogenic lycopene
- Purple produce such as beets and red cabbage is packed with heart-protective carotenoids.

Fermented Foods. Sauerkraut, kimchi, and other fermented foods appear to offer a variety of health benefits.

Meat. Pork, beef, lamb, chicken, turkey, and other flesh foods are all good for you, especially when the animals themselves have "eaten well" — that is, enjoyed diets that are evolutionarily appropriate to their species, such as grass (as opposed to grain) for cows.

Organs. Beef or chicken liver is one of the most nutrient-dense foods on the planet — a fantastic source of phosphorus, vitamin A, and folic acid. I urge you to experiment with them until you find a recipe you and your family enjoy, then eat liver or other organ meats at least twice a month.

Fish. Populations that eat seafood in abundance typically have longer healthy life spans than other populations. Fish, especially wild-caught, fatty, cold-water varieties such as salmon and black cod, are rich in omega-3 fatty acids, a vital nutrient for cardiovascular and neurological health.

Eggs. Eggs offer a complete package of protein and fat, and the yolk is a particularly rich source of choline, vital for brain health. Don't worry about cholesterol in the yolk. Even the federal government has recently conceded (after a mere 54 years of warnings to limit cholesterol consumption) that dietary cholesterol is not a "nutrient of concern."

Fruit. Avocado — yes, it's a fruit — is a fantastic choice, low in sugar, rich in satiating monounsaturated fat, and fine for daily consumption. Low-sugar fruits such as berries and apples are good choices as well. Generally, eat the fruit that is in season in your region, and do so moderately. While I've listed them in the "Enjoy in Abundance" section, be aware that modern, commercial fruit, especially bananas, have been selectively bred

for high sugar content.

Beverages. Water is always appropriate, but tea and coffee also offer abundant antioxidants in addition to caffeine that can boost metabolism and facilitate weight loss. Tea also offers catechins, specialized compounds that appear to lower LDL cholesterol and assist in losing body fat.

TREATS

Life is too short to spend it all in the cave. At the same time, modern indulgences can and should be carefully chosen — after all, all things being equal, why not make your treats healthful as well? Here are two that seem quite consistent with good health:

Dark Chocolate. Choose organic chocolate with at least 70% cocoa solids, more if you can take the bitterness. Chocolate is rich in healthy saturated fat and contains abundant antioxidants.

Alcohol. Red wines appear to have numerous health protective benefits, but moderate consumption of other forms of alcohol has also shown benefit. Stick with wine or spirits such as vodka or whiskey, which are low in carbohydrates. Drink beer sparingly (I know, I know — sorry!). Avoid mixed drinks that contain sweeteners.

PUTTING IT ALL TOGETHER

In terms of percentage of calories from the three macronutrients, my diet generally runs about 60% fat, 20% protein, and 20% carbs.

(Don't make the common mistake of "going low-carb" by eating too much protein. About 20% of calories from protein is plenty. Too much protein and insufficient fat can stress the kidneys and lead to other health concerns.)

But I don't do calculations anymore. I simply eat as much of the healthful foods listed above as I wish, avoid the unhealthful ones, and get on with my active life.

I also skip meals often, at least twice a week.

Intermittent fasting helps the body clean out accumulated cellular junk (upregulates autophagy, for you geeks out there), and once you go high-fat, moderate-protein, low-carb, your appetite — no longer ravenous — is easy to control.

This is a long article, but believe me, I worked hard to keep it this short! There's a great deal to say about the current state of dietary science, which has changed remarkably over just the last decade. The young pro-sat-fat

researchers are gaining on their vegetarian brethren. It's an exciting time!

WHY ALL THE CONFLICTING NUTRITION ADVICE?

But let me leave you with the answer to a question I am often asked: If grains and seed oils are so bad for us, and meat, eggs and animal fat are so good, why have we been told the opposite for the last 50 years?

This, my friends, is simple.

Money.

Grains and seed-based oils are obscenely profitable, especially when subsidized by Uncle Sugar. And since grains are easy to transport and store, the companies that sell them are massively centralized.

Conversely, meat, eggs, and other animal-derived foods are difficult to raise, ship, and store; get virtually no subsidies from you-know-who; and are consequently produced by decentralized growers making thin profit margins — too thin to hire lobbyists, or to prop up nonprofit marketing shills like the American Heart Association or the Academy of Nutrition and Dietetics.

So… Big Grain has plenty of money to persuade you that 4 cents worth of commodity corn inside a $3 box of Corn Flakes is "heart healthy," while ham and eggs are not.

Meanwhile, the other side is too busy eking out a living to respond.

And that's why the myths persist.

But you, dear reader, don't have to believe them anymore.

A TYPICAL DAY'S MEALS

In the course of a regular day, here's what eating this way looks like…

Breakfast: One of my favorite quick breakfasts consists of two hard-boiled eggs, a ripe avocado, ¼ cup coconut oil and the juice of one lemon. I combine them in a bowl, mince with a scissoring motion from two knives, and eat. If I have a bit more time, I'll sauté green vegetables in about ¼ cup of coconut oil or duck fat (my new fave — just found a source at my local gourmet grocer!) and throw in some protein from the previous night's meal — steak, fish, or chicken.

Lunch: Today, I had a salad with plenty of olive oil and a large chunk of Gouda cheese, selected because it's fatty and a rich source of vitamin K2 — a vital nutrient for heart and brain health and one in which many Americans are deficient. I also ate a handful of hazelnuts.

Dinner: My wife, Laurie, made an amazing beef stew in the slow cooker

with grass-fed beef, a mix of regular and sweet potatoes, string beans, and a few carrots. I added about 2 tablespoons of butter to my bowl.

Beverages: As I do most days, I drank green iced tea — I make four quarts at a time, storing it in four one-quart stainless steel drinking bottles in the refrigerator. I have plain water before, during, and after hard workouts. I drink a couple of cups of coffee with heavy cream daily.

Treats: I had one glass of pinot noir with dinner. A couple of times a week, I'll have an ounce or two of bittersweet dark chocolate.

This regime keeps me, at age 60, at an optimal bodyweight of 190 pounds on my 6-foot, 4-inch frame, with the same waist size I had when I was 30 years old — 34 inches.

More importantly, I am in robust health, easily able to ride a bike 30 miles, swim a hard mile, and bench-press my weight in the gym. Generally, I feel mentally sharp, confident, and optimistic.

I would emphasize here that I know luck always plays a part in good health, and one can do everything described above and still experience illness, even severe illness.

But I do believe my lifestyle has shifted the odds of being healthy significantly in my favor.

IS FASTING RIGHT FOR YOU?

Though intermittent fasting has been shown to have innumerable health benefits — including stopping the progression of, and even curing, Type 2 diabetes — it may have negative side effects for some people.

It is even possible that the fasting mimicking diet, or FMT, discussed in this month's cover story, could be problematic for some.

So before you launch yourself into IF, you first need to make sure it's right for you.

Diabetics or those with hypoglycemia must make sure they monitor their blood sugar levels carefully and eat enough fat and protein to keep their blood sugar from getting too low.

Women also need to be cautious with fasting, as it may have a negative effect on hormones and reproductive health.

In the IF and Paleo communities, many women have reported that upon trying IF for a few weeks, they began to experience negative effects, including poor sleep, loss of libido, and even dysregulation of the menstrual cycle.

The only studies to examine the effects of alternate-day intermittent

fasting on reproductive hormones between the sexes are in rats. One study found that within 15 days of starting the IF experiment, the female rats had disrupted reproductive cycles and hormone dysregulation. In all of the studies, IF negatively affected female hormones and stress response.

There's a lack of human studies on IF for women, so we really don't know for sure if these effects are applicable to humans. But from an evolutionary perspective, it makes sense that a woman's body will halt her reproductive capability if it is getting a signal that food is scarce.

These are all signs IF is not working for you:

- Your menstrual cycle stops or becomes irregular
- You have problems falling asleep or staying asleep
- You experience hair loss, dry skin, or acne
- You notice you are getting worn out or sick more often
- You start having mood swings or lose your libido
- You notice problems with your digestion.

And some people should avoid fasting altogether, or at least be sure to be under the supervision of a competent doctor. Don't try IF if:

- You're pregnant
- You have a history of disordered eating
- You are chronically stressed or have trouble sleeping
- You have Type 1 diabetes.

The most important things for both men and women are to listen to your body and to consult your doctor! Ultimately, IF should be a positive rather than a negative experience.

My Weight Loss Secret Weapon

by Andréa Albright Fitness Expert

When you get a sugar craving, it's tempting to reach for foods like chocolate and cookies.

The trouble is when you eat foods like this that are loaded with sugar and chemicals, you spike your insulin — which makes your body store fat.

I used to be overweight and often fell prey to these kinds of snacks. But then I finally figured out how to lose my weight naturally.

One of the ways I did this was by substituting healthy treats for unhealthy ones.

Want to know one of my "secret weapons"?

Peppers.

Not only do they taste delicious, but they're, in fact, one of nature's best foods for dieting.

Their crunchiness makes them very satisfying, but because they come in all kinds of flavors, they can be a great snack for any occasion.

If you need a sweet fix, grab some chopped-up raw red peppers. If you feel like something with a bit more bite, eat some spicy peppers instead.

I especially like the spicy ones, because they contain a nutrient called capsaicin. This is what makes them hot, and studies have shown that people who eat spicy foods actually better control their diets.

Recent research at the University of Wyoming appears to confirm that capsaicin actually raises your thermogenesis, which is your body's metabolism. So the higher your thermogenesis, the more calories you're going to burn.

Not only that, but capsaicin also suppresses your appetite. Now, of course, you don't want to completely eliminate your appetite, but it's great to have more control so that you're not constantly feeling ravenous.

Peppers are very versatile. You can chop them, saute them, grill them, bake them…

However you prepare them, keep a whole bunch of them in your fridge so you can just grab them and go.

Andréa Albright is a top-selling fitness author, cover model, and health expert. She shares her secrets to lasting weight loss on her website **MyBikiniButt.com**

Are You Making This Common Weight Loss Mistake?

There's a Problem With the Advice to Eat More Fruit and Vegetables…

We've heard it *ad nauseam* — to lose weight, eat more fruits and vegetables!

But I've always had two big problems with this blanket recommendation.

First, given how it's phrased, it places these two types of produce on an equal footing. Yet fruits, especially tropical fruits, tend to be much higher in fat-forming fructose than vegetables. A healthy, weight-controlling diet should incline more toward vegetables than fruits.

But an even larger issue is that *within* these categories, the recommendation to eat more does not specify an optimal *type* of fruit or vegetable.

A new large scientific analysis tackles that very issue.

A LARGE, LONG STUDY... THE BEST KIND!

The researchers tracked the diets of roughly 120,000 men and women who were in their 30s and 40s and who took part in the Nurses' Health Study, Health Professionals Follow-up Study, and Nurses' Health Study II.

They followed them for 24 years, doing interviews every four years. They corrected for other variables that could affect weight, such as differences in exercise levels.

On average, the subjects gained weight over the period, but those who ate relatively larger amounts of vegetables or fruits gained less.

Specifically, increased intake of berries lowered the weight gain by 1.11 pounds. Eating more apples or pears dropped the weight gain by 1.24 pounds.

Vegetables linked to smaller-than-average weight gain included carrots and peppers.

But increased consumption of potatoes, corn, and peas were not linked to smaller weight gains.

A FEW SURPRISES...

The average Americans eats about 45 pounds of potatoes annually, and I doubt anyone is shocked to find that this starchy tuber — often deep-fried in soybean oil to create French fries — isn't the best vegetable choice for those who seek to control their weight.

But the fruit "winners" were more revealing. Apples, pears, and berries are relatively low-sugar fruits with a relatively low glycemic index, yet I don't believe many Americans put fruits like these in a special category or make a point of eating them versus higher-sugar fruits such as cantaloupe or bananas.

A simple way to keep the best weight-loss fruits in mind is to think in terms of climate. If a fruit can be grown in the northern tier of the continental U.S., chances are it's a better choice for weight control than one that grows only in the southern tier or the tropics.

One more surprise: Eating more fruit was associated with a slightly lower increase in weight than was eating more vegetables.

That could be an artifact of the "potato" effect: If you are a big vegeta-

ble eater, but (like most Americans) most of those vegetables are potatoes, you'd likely do well to eat more fruit instead.

It could also signal that fruits are often used as a substitute for worse foods (think snack foods such as candy) than are vegetables.

BOTTOM LINE

If you seek to control your weight, lean toward green, leafy veggies that offer maximum nutrient density and minimal caloric load.

And as for fruits, go for the colder-climate types over more tropical varieties. I am an especially big fan of raspberries. Not only do they promote weight control, but they also have potent anti-cancer powers, likely due to their relatively high ellagic acid content.

That's why my go-to breakfast is an egg-greens scramble, followed by roughly 6 ounces of raspberries and a cup of black coffee. A wonderful way to start the day!

The Diet Soda Scam

Drinking Diet Soda Does Not Lead to Weight Loss

Ever notice the difference between the folks in a diet soda commercial versus the people in real life you see drinking diet soda?

Not only are the people in the commercials all young, good-looking, and having tons of fun, but they're also quite svelte. But it seems three out of four people you see in real life drinking diet soda are somewhere on the spectrum between overweight and obese.

It's probably no coincidence. A new study suggests that there may not be just a *correlation* between being drinking diet soda and overweight, but perhaps a *causation*.

The new study examined 749 individuals over the age of 65 for about 9.5 years. Every two years, researchers had the study participants estimate their average diet soda intake.

The results were striking.

Those who drank no diet soda experienced a waist circumference increase of less than an inch over the 9.5 years. Occasional diet soda drinkers gained 1.83 inches. Surprising even to the study authors, however, was what happened to those who drank the most diet soda: Their waists expanded by over 3 inches!

The authors theorized that artificial sweeteners actual drive our desire

for additional consumption of sugar and carbohydrates in general because our bodies aren't getting the calories that they expect to follow the sensation of a sweet taste.

Studies in mice have shown that fake sugars actually mess up the gut bacteria and increase the risk of insulin resistance and glucose intolerance, which can lead to weight gain. Artificial sweeteners have also been shown to reduce leptin, which is the hormone that inhibits hunger.

Though the diet soda industry would have you think otherwise, diet soda is not a good way to help you lose weight. Coupled with all of the other potential health concerns that have been linked to artificial noncaloric sweeteners — including increased risks of several kinds of cancer, multiple sclerosis, and gut dysfunction — your best bet is to stay as far away from these fake foods as possible.

If you want a fizzy drink, try sparkling water flavored with a squeeze of lemon or lime.

Freedom From Counting Calories:

Keep Track of These to Burn Maximum Fat Instead

Forget counting calories to burn fat.

It's a pain in the butt.

Few people will even bother to start.

Even *fewer* people will keep going long term.

And one more minor detail — it doesn't work — or at least it doesn't work for most of us. If you've tried calorie restriction in the past and it failed for you, you're not alone.

In fact, it's failed us as a country: Nationwide data shows that even though we're eating fewer calories than we did roughly 10 years ago, we're getting fatter.

Keep that in mind the next time anyone tries to tell you burning fat is a simple matter of dropping your calorie intake. Personally, I think this data should be memorized by every doctor who ever sees an overweight patient struggling with sticking to a low-calorie diet. And if they forget, they must write on a chalkboard (in cursive!) "I will not recommend low-calorie diets to patients who want to lose weight" a hundred times.

Allow me to get back on track here with some very good news. Science has shown there's a certain trick you can use to lose weight without restricting calories at all. In other words, you can eat until you're fully

satisfied and (as long as you're not stuffing yourself) you will burn fat.

In fact, a study out of the University of Cincinnati and Children's Hospital Medical Center showed using this trick can help you lose more than twice as much weight and burn more than twice as much fat than if you exert massive willpower to drop your calorie consumption.

But the benefits don't end there. Take a gander at these and see which appeals most to you:

- Appetite regulation: You'll feel more full, with fewer blood sugar spikes and dips that lead to intense hunger and cravings
- Enhanced focus and mental clarity
- More energy
- Lower blood sugar and insulin levels
- Increased HDL ("good") cholesterol
- Lower triglycerides
- Effective seizure control (it has been used for this since the '30s)
- Enhanced athletic performance
- Reduced inflammation, which may lower risk of — or reduce, arrest, or reverse progression of — a wide variety of conditions including:
- Alzheimer's disease
- Cancers, including late-stage cancers
- Cardiovascular disease
- Parkinson's disease
- Type 2 diabetes
- Polycystic ovarian syndrome.

Enough buildup. What is this trick?

It's pretty simple. Instead of counting calories, count the number of carbohydrate grams you eat. More specifically, keep them low. Way low. As in, under 60 grams per day, maximum.

A tall order for most people, but the science shows this is as close to a surefire method to flip your fat-burning switch on as you're ever going to get this side of liposuction.

Here's how it works:

When your body doesn't have carbohydrates for fuel, your liver and kidneys begin to metabolize fats. As a result, special compounds called ketones are produced. Then they're delivered to your cells where they're used to make adenosine triphosphate, known — mercifully — by the abbreviation ATP.

Your body uses ATP for energy. In other words, this entire chemical process is how your body quite literally *burns fat for fuel*.

The "catch" is your body will not do this as long as there's enough glucose in your muscles, liver, and blood for easy energy. So you must do two things:

1. Swear off eating more than 60 grams of carbs per day.
2. Weather the adjustment process as your body switches to burning its fat stores for fuel, which usually takes around two weeks.

It's a shame, but most people don't last more than two or three weeks on a low-carb diet, which means they tend to quit precisely when the true fat-burning effects start kicking in.

If you're still on the fence about trying to cut carbs (or attempting to cut them again), keep this in mind: It'll be much easier now that you know (if you read *Sin Foods For Your Health* prior to this chapter) you can eat liberal amounts of saturated fat in the form of meat and butter.

Let's be honest: Is it really so hard to skip the bread if you know you can splurge on a juicy steak instead? With a pat of butter on top?

However, I understand you may still have some reservations about trying this trick. Especially if you've attempted a very low carbohydrate approach before and it didn't turn out like you'd hoped.

First, as I've mentioned, ditching the sugar, grains, and other carbohydrate concoctions can be nigh impossible when you're under the impression you have to eat like a politically correct bird. But you don't. Natural fats are back on the menu. Enjoy them and the satiety they provide.

Second, you have to be more nuanced than usual in your approach to very low carb if you want to succeed long term. Most people can't make it past the first couple weeks, which is your body's adjustment period. This is the "make or break" transition when your body ditches burning sugar for fuel…and switches to burning body fat.

These first two weeks might not be pleasant. Some side effects include:

- Constipation/diarrhea (MCT oil like coconut oil can have a laxative effect, so start with small amounts!)
- Fatigue and headaches
- Muscle cramping due to water loss (eating more salt, drinking bouillon, and taking magnesium can help with this)
- Increased risk for kidney stones (again, always make sure you drink plenty of water).

Another disadvantage of this strategy is that it's inconvenient — at least at first. Most restaurant meals fall out of bounds, unless it's a strict meat-and-veggie combo. And prepackaged, store-bought foods are an absolute nightmare of processed carbs, minimized fat, unhealthy preservatives, and addictive artificial flavorings to keep you coming back for more.

But if you can withstand temptation and muster your willpower… fat-burning success doesn't get simpler than this.

STEPS TO FREEDOM

1. Eat fewer carbs, until you're consuming a maximum of 60 grams per day.
2. When in doubt, see Step 1.

In all seriousness, here's a general breakdown of what your daily fat-protein-carb ratio should be:

60–70% fat
20–30% protein
0–10% carbohydrate

The more you can make a game out of avoiding carbs, especially from processed and grain sources, the greater your chances of winning the fat-loss battle.

This is especially vital in the morning. Big Grain has done a bangup job brainwashing the American public into believing a hefty helping of cereal and bagels every morning (with sweet orange juice, which is metabolically identical to soda!) is the way to start your day off right. And they have a point — it will give you plenty of quick energy.

What they don't mention is if you want to burn fat, your body should **not** have a massive injection of easy-to-process energy stores first thing every morning. Otherwise… why would it bother making ketones out of body fat?

By avoiding carbs, especially in the morning, you force your body to rapidly deplete its reserves of glucose. Once they're exhausted, ketosis begins and your fat gets burned.

Because this is such a charged, controversial subject, you might still have some questions. Indeed, probably one of the most common reasons people abandon otherwise-effective low-carb diets is because well-meaning but misguided friends scare and shame them into returning to "heart-healthy whole grains."

So here's some reassurance of what the science says, in case you have your doubts:

Question: *I've read about/experienced low-carb diets causing headaches and fatigue. Doesn't that mean they're bad?*

Answer: The vast majority of the time, it simply means you're excreting more water and salt than usual. The solution is just as basic:

Drink more water.

Eat more salt.

Concerned about the health effects of the latter? Don't be. First of all, you're excreting more salt through your urine anyway, so eating more in response won't increase your net amount. Plus, new research is showing the whole connection between salt intake and heart health is much more complicated than we originally thought … and natural salt isn't so bad after all (honestly, does this even surprise you?).

Question: *I'm eating more natural fats now, so why is my weight loss stalled?*

Answer: It's not enough to simply eat more fat. Frankly, who wouldn't want to add more fat to a high-carb diet? Pardon me, waiter, I'll have another hot-fudge sundae!

You must combine adding more fat (the easy part) with eating less than 60 grams of carbohydrate per day (the hard part). The only solace I can offer is that it gets easier over time. Within a month, you'll find the concept of pounding down the U.S. average of 350–500 grams of carbs daily rather disgusting — sort of like idea of drinking a big glass of maple syrup.

Question: *Should I eat high amounts of protein?*

Answer: This is an excellent question. And if you've ever tried the low-carb diet approach and it didn't work for you, high levels of protein may have been why. That's not a typo.

Your liver can convert protein to glucose (a form of sugar you can use as fuel) through a process called gluconeogenesis. If this occurs,

ketosis cannot be achieved, and your fat-burning switch doesn't flip on.

As counterintuitive as it sounds, in order to maximize your fat-burning potential, you need to eat a **high-fat, moderate-to-low-protein, low-carb diet.**

No wonder so many people are overweight today. This is almost exactly the opposite of the ratios recommended by the government and official "health" associations such as the American Heart Association. It's also the opposite of the most common foods you'll find in the grocery store.

***Question**: I heard all the weight lost on a low-carb diet is just water weight.*

Answer: Like some pervasive rumors, this falsehood began with a grain of truth. When you first cut carbs, you will lose more water (which is why you must drink more water to compensate, or you might feel sluggish and get headaches).

This is because each gram of blood sugar is dissolved in about four grams water. So as you burn the stored sugar, the water that holds it in solution gets excreted as well. So you can rapidly lose weight immediately after switching to a low-carb diet… and rapidly gain it back if you "cheat" and have some carbs.

This has nothing to do with fat loss — it's just that rising and falling sugar levels cause the amount of water in your blood, muscles, and liver to fluctuate dramatically.

Just stick with the low-carb regimen. Once the water weight is expelled, you'll start burning fat. You'll keep losing weight, but it will happen more slowly.

***Question**: But what about all the vitamins and minerals in fruits? They have plenty of carbs, but don't I need them to survive and be healthy?*

Answer: Absolutely not. No one needs fruit to be healthy. There is not a single vitamin or mineral in fruit that cannot be obtained more abundantly in vegetables, not to mention in organ meats (beef liver, for example, has four times as much vitamin C per gram as an

apple). The whole "fruits and vegetables are vital" mantra, repeated endlessly by every mainstream nutrition "expert," has convinced most Americans that these two classes of food are equally healthful. That's absolutely false. Low-sugar vegetables — especially the leafy greens — are vastly superior to fruits for overall health.

***Question**: I heard that ketosis is a dangerous medical condition!*

Answer: You probably heard this about ketoacidosis, which is very different from ketosis. Ketoacidosis is a dangerous buildup of ketones in the blood. They're acidic, so too many ketone bodies acidify the blood, which can lead to serious effects. Ketoacidosis occurs when ketones levels are high and blood sugar levels are high as well because the pancreas isn't properly producing insulin. It's a potential concern only for Type 1 diabetics who cannot produce insulin.

Another important point: A natural ketogenic diet can produce fantastic results for someone suffering from Type 2 diabetes. Most of these people still have the potential to produce insulin but aren't able to regulate their levels because of their lifestyle and diet. For these folks, a ketogenic diet might eliminate their diabetes altogether.

EXCEPTIONAL FAT-BURNING FOODS

I roll my eyes whenever some "expert" blithely recites the mainstream weight-loss mantra: "Losing weight is just a matter of calories in and calories out."

This simple sentence aggravates me for two reasons:

1. Most men and women care about a lot more than merely losing weight: It's also the composition of said lost weight that matters, as well as how easily it's dropped.

2. Oh, and the phrase is **wrong**.

You see, calories are an old, discredited measure of the "fattening" potential of a food. Most people don't know that the whole concept of calories was borrowed from steam-engine designers.

They invented it in the 1810s and 1820s to help them determine which fuel would make an engine run longest. Nutrition "scientists" borrowed it in the 1870s to help them discover which food would "fuel" laborers most cheaply.

The problem? Human beings are not steam engines. We don't "burn" foods. We metabolize them in complex ways that make calories a crude, inaccurate measure of how much energy — or fat — we can make from them.

Consequently, two foods with identical calorie counts can have dramatically different effects on our fat cells.

As you'll read below, certain foods have been shown through scientific studies to cause an exceptional amount of fat-burning.

Don't get me wrong: The foundation of your fat loss will come from the broad, general principles laid out in Freedom From Fat. No amount of special ingredients will make up for the high-carb, low-fat nonsense supported by most nutritional gurus and our government.

But if you want every advantage on your side for exceptional fat burning, then the science indicates these foods can help.

GREEN TEA

Green tea is a "superfood." Its many health benefits have earned it an important place in diets worldwide, particularly as an integral part of Eastern food and medicine.

The studies on green tea's powers for weight loss are overwhelming. The secret lies in something called "catechins." Catechins are tannins found in green tea that provide powerful antioxidant activity — they're essentially green tea's "active ingredient."

One study monitored 182 moderately overweight Chinese subjects to see the effects of catechin in green tea. Researchers concluded that two servings of extra-high catechin green tea per day reduced total body fat, body composition, and abdominal fatness.

When consumed every day, and combined with exercise three times a week, green tea with catechins was found to enhance "exercise-induced changes in abdominal fat," showing that green tea could help accelerate the results of exercise.

(Normally, this would be the appropriate time for me to crank up the font size and declare: "Green Tea Blasts Away Belly Fat!" but you've already gotten your hands on these guides, so I don't think you need to be beaten over the head with the benefits of this amazing beverage.)

Moreover, the University of Birmingham's School of Sport and Exercise Sciences found that consuming green tea extract "can increase fat oxidation during moderate-intensity exercise and can improve insulin sensitivity and glucose tolerance in healthy young men." The benefits

have been seen in both obese and healthy participants.

It's also better for weight loss than just drinking coffee or black tea. One meta-analysis out of the Department of Human Biology, Nutrition and Toxicology Research Institute at Maastricht University set out to find whether catechin-caffeine mixtures (like green tea) were more effective in increasing energy expenditure and weight loss than caffeine on its own.

Researchers evaluated six similar, high-quality studies and found that while both caffeine and catechin-caffeine mixtures boosted energy expenditure, only the catechin-caffeine mixture (green tea) contributed to fat oxidation — in other words, a loss of body fat.

Take a page out of the book of Chinese medicine and add green tea to your daily routine. That, combined with some healthy exercise, will accelerate your weight loss.

GRAPEFRUIT

This pucker-inducing tangy fruit also has hidden weight-loss power.

Researchers from the Department of Nutrition and Metabolic Research at Scripps Clinic in La Jolla, California, put grapefruit to the test against apple juice and asked 91 obese patients to include variations of fresh grapefruit, grapefruit juice, apple juice, or a placebo before each of their three daily meals.

In the end, "the fresh grapefruit group lost significantly more weight than the placebo group," and the weight loss benefits for a fresh grapefruit also beat out the juice alternatives.

Grapefruit consumption also resulted in "modest weight loss… a significant reduction in waist circumference… and a significant reduction in systolic blood pressure." Although the researchers from that particular study were not able to conclude that it significantly decreased body weight, they determined that the "improvements in blood pressure and lipids demonstrated in the intervention group suggest that grapefruit should be further evaluated in the context of obesity and cardiovascular disease prevention."

Based on these results, choose a little grapefruit instead of any kind of grain and make it one of your first choices of fruit.

SPINACH

You remember Popeye, don't you? The rough-and-tough sailor who could pump up his arms at will by downing a can of spinach, usually to save his damsel-girlfriend Olive Oyl.

Turns out he might have been on to something. A recent study from Lund University in Sweden published in the journal Appetite followed 38 women for 12 weeks. Scientists asked them to add a special extract from spinach leaves to their diet in the form of a green smoothie at breakfast. The women were also asked to eat three meals and exercise for 30 minutes daily.

Result? The extract induced weight loss. Furthermore, it lessened the urge for sweets and fat, curbing appetite, from the first day of the study through the last. Women following the regimen lost an average of 11 pounds!

These extracts are green-plant membranes called thylakoids, which slow down the digestive process, allowing you to feel more full and satisfied after a meal. The scientists in this study theorize that thylakoids also reduce cravings for sweets.

One woman who participated in the experiment admitted she used to feel food cravings, especially in the evening. But when she added a shot of thylakoids to her diet, she said, "I didn't have those cravings at all. They disappeared."

Green-plant membranes are found in all green plants, but we're focusing on spinach because it's so versatile. While it's a great healthy option anytime, for fat loss, I suggest you consume it just as the participants did in the study:

Grind some spinach in a blender with water, so the thylakoids are freed from the plant cells, and take a shot before your first meal of the day. Add some hard liquor if that helps it go down. (I'm only kidding… sort of.)

HOT PEPPERS

First, let me introduce you to something called capsaicin — a component of chili peppers. Capsaicin is the stuff that makes your eyes burn if you happen to rub them after chopping a jalapeno.

If this has never happened to you, take it from me — it's not a pleasant experience.

Capsaicin creates a burning sensation when it contacts skin or eyes or is ingested. It's what makes many spicy foods so intense.

Although capsaicin acts as an irritant for humans on an external level, recent studies have shown that peppers rich in the stuff could accelerate weight loss.

One study evaluated 10 men, giving them capsaicin an hour before low-intensity exercise. (The participants were given a coated tablet, so

they avoided the spicy-taste side effects.)

The researchers found that capsaicin "is a valuable supplement for the treatment of individuals with hyperlipidemia and/or obesity because it improves lipolysis without any adverse effects on the cardiac depolarization and repolarization process."

In English, this means it can help break down fats without the negative side effect of speeding up heart rate. Ingesting capsaicin has also been shown to decrease appetite and increase satiety — you'll feel the need to eat less often and feel more satisfied when you do.

Researchers from the Oxford Polytechnic Institute found a "diet-induced thermic effect" resulting from participants adding chiles and hot mustard to their meals.

By adding three grams of chilies and three grams of hot mustard to their meals, the volunteers in the study increased their metabolism by 25%.

According to George Harris, then editor-in-chief of American Health, "What the Oxford researchers have discovered is that hot peppers raise the thermic effect 25% higher than the normal jump, about 45 calories per 700 (consumed). Now, that's not a huge effect and it's not going to make us all become pepper dieters. But if you combine it with other healthy eating habits, you've got a major prospect."

The long-term effects have not been proven. Eventually, most people do build up a resistance to spicy foods and might not continue to see the same results.

But if you're not used to spicy food, and want to give your metabolism a little extra kick, adding some hot pepper sauce and hot mustard to your meal might just do the trick.

VITAMIN D

Vitamin D is good for more than just building strong bones.

A double-blind randomized clinical trial observed the effects of vitamin D3 supplements at a dosage of 1,000 IU daily on 77 healthy, overweight, and obese women. They found that the supplements resulted in body fat mass reduction.

Research has shown that having low vitamin D levels makes you more likely to be overweight, with less muscle mass and more belly fat. Having low levels of vitamin D increases fat storage in the body, slowing metabolism.

This is true of men and women of all ages and ethnicities. Adding vitamin D to your diet could help you shed those extra pounds without

altering your diet or exercise routines. An estimated 75% of American teens and adults are deficient in this vital nutrient — which means you probably are as well.

COCONUT OIL

For all the nutritional faux experts out there who still blather that "a calorie is a calorie" when it comes to fat loss, I'd like to introduce them to coconut oil.

Specifically, the fat that's abundant in coconuts, called medium chain triglycerides — or MCTs, for short.

Your body metabolizes this kind of fat differently from others, taking it to the liver for immediate energy use.

One study set out to test how effective MCT supplements would be for enhancing fat loss in a low-calorie diet. Obese women were observed for four weeks, and the group of women taking MCT supplements "showed a significantly greater decrease in body weight during the first two weeks." They also experienced less hunger and more satiety — the feeling of fullness — after meals. These differences gradually decreased after the first two weeks but never disappeared.

Another study from the School of Dietetics and Human Nutrition at McGill University studied young, healthy women and found that MCT was able to "increase endogenous oxidation of long-chain saturated fatty acids." In other words, it boosted the body's ability to burn all types of fat, which suggested MCT would be able to play a role in body weight control long term.

A 2003 study showed that not only is the fat found in coconut oil highly thermogenic — eating it tends to increase energy expenditure (fat burning) compared against the same amount of calories from other fats — but it can also help you lose more weight.

Still another found it shrinks the dreaded belly fat.

Paging through all the science on coconut oil's health-promoting and fat-burning effects is no easy task. But luckily for you, coconut oil is easy to add to your diet.

Simply replace "vegetable oil" (the marketing moniker for soybean oil) with coconut oil — it's better for you and will help jump-start your weight loss. If you like the taste, grab a spoonful whenever you have a craving for food.

Try it on your skin, too! You might be pleasantly surprised.

RED MEAT

Eat healthy animal-based foods. For over 50 years, animal-based foods have been demonized in the U.S. as contributors to elevated risk of heart disease. Even today, the vegan diet — devoid of all animal derived foods, including meat, milk, and eggs — is held by many to be the gold standard in healthy eating.

None of this makes any sense. Studies have only been able to show an association between red meat and chronic health problems because the only people who consumed it in quantity were those who ignored all health advice — in other words, they also smoked, were sedentary, ate copious amounts of processed carbohydrates, and so on.

Studies that link beef consumption to cancer, diabetes, and so on are invariably tainted by these "confounding" variables. Further, no large-scale study I've been able to locate has bothered to differentiate between health effects of eating beef from grain-fed versus grass-fed cattle — despite the fact that grass-fed animals have a more favorable ratio of heart-healthy omega-3 fats.

And yet even without this important distinction, a 2014 report in the journal Meat Science explains that "large population studies both in Europe and North America have recently reported no association between intakes of unprocessed red meat and any cause of death, including cardiovascular disease or cancer."

Red meat and other animal proteins are a healthy, necessary part of the human diet. We went into more detail in the "Sin Foods for Healthy Living" chapter, but overall, red meat is nutrient-rich and high in quality protein and healthy fat. The current trend of replacing meat with processed alternatives deprives the body of necessary nutrients and replaces healthy fats with empty carbohydrates.

The fact is human beings evolved by, and came to thrive upon, consuming the muscles and organs of a variety of animals, including large ruminants like cattle. Red meat is an excellent source of:

- Vitamin B12, which is vital to mental and physical health, especially in protecting the integrity of nerves and the cardiovascular system

- Vitamin D, and particularly a partially metabolized form called 25-hydroxycholecalciferol, which is much more easily assimilated

than the forms of vitamin D one gets in supplements

- Iron, in a form called heme iron. This is more readily absorbed than the non heme iron found in plant foods

- Saturated fat, the kind of fat your body needs. Saturated fat is structurally sound fat — and since the membranes of your cells are made of fat, it pays to make them out of this solid, rather than liquid, form of fatty acid.

And just last year, red meat was shown beneficial for fat loss as well:

A recent analysis of data from the United States National Health and Nutrition Examination Survey (NHANES) reported that adults who eat red meat tend to have a lower body mass index and a smaller waist, eat more vegetables, and are less likely to suffer from hypertension than those adults who do not eat red meat.

Unprocessed red meats are a terrific source of high-quality protein, promoting healthy growth in children and healthy weight in adults. A report from The American Journal of Clinical Nutrition shows that higher-protein diets markedly increase satiety, meaning that you don't need to eat as much to get and stay full. The Meat Science report also examines data from NHANES, concluding that "increasing protein from 15% to 25% of energy intake in an obese individual would be expected to be associated with a decrease in energy intake of:

438 calories/day if protein is substituted for carbohydrates

620 calories/day if protein is substituted for fat."

Eat more protein and fats from healthy animals and you will eat fewer carbs — the very things leading to weight gain.

STEPS TO FREEDOM

1. Start your day with two cups of green tea to bump up your antioxidants and stimulate your metabolism.

2. Eat half of a fresh grapefruit before a meal.

3. Grind up some green veggies in water and drink a shot before a meal.

4. Don't shy away from spicy foods and peppers — the capsaicin will increase your fat-burning potential.

5. Make sure you're getting an adequate amount of vitamin D — if you don't spend roughly an hour a day outdoors between 10 a.m. and 3 p.m., include fish at least three times a week in your diet or consider taking a supplement.

6. Stock up on coconut oil — take it on its own, or use it as a replacement for other fats in your cooking to be sure you're getting a healthy dose each day.

7. Eat healthy, animal-based foods. Adding meat to your diet will help increase your feelings of satiety while providing you with healthy fats and other nutrients.

THE FOOD TIMING TRICK TO ACCELERATE FAT LOSS

I'm sure you've heard the supposedly sage advice "Eat five or six small meals per day" for health and weight loss. As a young man in the 1970s, I never heard anyone suggest this, but these days, it's close to nutritional dogma. An online search of the phrase "eat many small meals" returns over 275,000 results!

Maybe you've even passed this advice along yourself.

If so, consider yourself forgiven. Because "gems" like these are buried so deep in our psyches that we seldom think to question — much less reject — their basic premises.

But in this case, you might want to explore whether this whole "many small meals" thing is the real deal… or just common senselessness.

When people are told to "eat many small meals," what they hear is "eat all the time," an activity at which most Americans excel.

It's no coincidence that obesity rates started ratcheting skyward in the 1980s, more or less in tandem with this widespread endorsement of more frequent meals. (The other major culprit was the government's nonsensical "low-fat, high-carb" dietary recommendation, which also leads to excessive hunger and chronic overeating).

In my overseas travels, I rarely see people chowing down in their cars or in line for a movie or otherwise outside the traditional time and space boundaries of a meal. In the U.S., it seems that everyone continually eats everywhere.

Bad news: The theory of eating five or six meals per day for health and weight loss… is pure moonshine.

And the good news (I like to end on a high note): A slight tweak to this

theory could actually *be one of the best-kept secrets for fat burning*. More on that in a moment. First let's demolish the myth of noshing on nuggets of food throughout the day:

One study out of the Netherlands' Maastricht University Medical Center evaluated the differences in a low-frequency diet of three meals per day versus a high-frequency diet of 14 small meals per day.

Although the low-frequency diet did result in more drastic fluctuations in insulin levels (higher highs and lower lows), there was no difference in energy expenditure between the diets. This means that there was no weight-loss benefit to eating smaller, more frequent meals.

The researchers believe that this might be because "the insulin levels did not increase high enough to inhibit fat oxidation in the [high- frequency diet]." In other words, since their insulin and glucose were continuously at the same level, there was no signal to switch on the body's fat-burning machinery.

Furthermore, they found that the low-frequency diet led to lower blood sugar levels, which led the researchers to suggest that "this can lead to a better body weight control on the long term."

A low-frequency diet of three meals per day led to greater feelings of satiety (in other words, fullness), meaning that the subjects were not hungry throughout the day and practiced better appetite control. These same results have been found in trials of young, healthy males as well as obese males when eating a high-protein diet.

And it gets worse for the whole "many meals" thing: A small study measured the blood glucose levels of subjects eating three high-carb meals in a day, six high-carb meals, or six high-protein meals. Glucose remained elevated longer throughout the day for those eating six high-carb meals. Chronically high blood glucose could lead to insulin resistance, often a preliminary step toward Type 2 diabetes. If you get that, a few extra pounds around your belly will be the least of your worries.

Chronically high glucose levels will also help keep you addicted to Big Food's products, so don't expect a peep from these industrial carb pushers about decreasing how frequently you eat.

SO WHAT'S THE ANSWER?

Certainly not starvation.

The Department of Medicine at the University of Rochester School of Medicine and Dentistry looked at the differences between short and pro-

longed fasting. They found that resting metabolic rates fell an average of 8% after three days of fasting, including the percent of carbohydrates and protein being metabolized.

But… this was after three days.

A long-term fast can have negative effects on your metabolism. Studies have shown that it's fat-burning potential spikes in the early stages of fasting and then evens out. Prolonging your starvation won't continue to spike your metabolic rate.

Short-term fasting, on the other hand, optimizes these increases, resting energy expenditure.

One easy strategy is called "alternate-day modified fasting." That simply means you limit your caloric intake every other day of the week. Then on the days you're not fasting, eat as much as you please.

This method is also more effective than regular dieting. One study from the Shahid Beheshti University of Medical Sciences in Tehran, Iran studied 74 people, comparing a "calorie shifting diet" (intermediate fasting) with a classic calorie-restrictive diet. They found that the calorie shifting diet had greater improvement, resulting in a decrease in hunger and an increase in satisfaction after meals after the subjects dieted for four weeks.

The results of intermittent, or alternate-day fasting, can be incredible. You do need to keep in mind what you're eating or how often. Stick to a high-fat, moderate protein, low-carb diet for the best results.

Otherwise, the sugars in the carbohydrates you consume will affect your insulin levels, negating the benefits of the fast.

OK, SO IT'S GOOD FOR FAT LOSS… BUT WHAT ABOUT HEALTH?

Many people who read about intermittent fasting bring up an important question:

"Even if I can drop fat rapidly, isn't it bad for my health to go without food for so many hours per day?"

If you're concerned about that, then here's a word that I humbly suggest you add to your healthy-living vocabulary.

It's autophagy, pronounced aw-TAW-fug-ee.

Coined by Belgian biochemist and Nobel Prize winner Christian de Duve in 1963, it combines the Greek *auto-*, signifying "self-," and *phagein*, which means "to eat."

Understanding what it is, and how to optimize it, is absolutely vital.

Autophagy happens continually within all multicelled creatures. That includes you and me, a couple of 37 trillion cell arrangements popularly known as human beings.

As we create new cells by the millions hourly, we must also carry out autophagy — disposal of the dying and dead cells via "self-eating."

The efficiency of your autophagous machinery is vastly important to your health.

During this process, lysosomes — tiny sphere-shaped structures inside each cell — spew out about 40 kinds of enzymes to break apart decaying proteins and other big molecules into smaller, simpler ones that can be used to build new cells.

Lysosomes also help to destroy disease-causing bacteria and viruses.

As with any bodily process, autophagy can be vigorous, average, or seriously screwed up. This matters. The efficiency of your autophagous machinery is vastly important to your health.

Robust autophagy leads to long life. Indeed, while you'll hear millions of claims that this diet or that behavior can extend life, optimal autophagy is one of the few scientifically confirmed processes that can do this.

In animal studies, life spans have been extended up to 65%.

Ramped-up autophagy has also been shown in studies to lower risk of cancer, insulin resistance, infection, heart disease, neurodegenerative diseases (such as Parkinson's and Alzheimer's), and inflammation in general.

A 2006 study by Johnson, Laub, and John states:

Since May 2003, we have experimented with alternate-day calorie restriction, one day consuming 20–50% of estimated daily caloric requirement and the next day ad lib [the technical term for "unrestricted"] eating, and have observed health benefits starting in as little as two weeks, in insulin resistance; asthma; seasonal allergies; infectious diseases of viral, bacterial, and fungal origin (viral URI, recurrent bacterial tonsillitis, chronic sinusitis, periodontal disease); autoimmune disorder (rheumatoid arthritis); osteoarthritis; symptoms due to CNS inflammatory lesions (Tourette's, Meniere's); cardiac arrhythmias (PVCs, atrial fibrillation); [and] menopause-related hot flashes.

So now you know, not only is intermittent fasting great for fat loss, it can also help you build robust health.

STEPS TO FREEDOM

1. Get hungry now and then. "One well-recognized way of induc-

ing autophagy is by food restriction, which upregulates autophagy in many organs," concludes a 2010 study from the Scripps Research Institute in La Jolla, California.

In other words, practice intermittent fasting! Skip one meal a day, or one day of solid food per week. Perhaps the simplest tactic is to eat only within a six-hour "window" from noon to 6 p.m. Do what works in your life. "Hungrying up" on a regular basis matters more than the precise form and timing.

Of the three steps I'm going to present here, this first step is the most effective. Yet mainstream health advice often advises just the opposite.

Now, I realize that disciplined eating is not easy. I like to chow down as much as, and perhaps more than, the next guy. But I've found it helps me to power through bouts of hunger to imagine leagues of industrious lysosomes busily power-washing accumulated junk out of my tissues.

Make hunger your friend. Regularly embracing even mild hunger can ultimately bring not only physical health but also mental focus and improved mood… and, of course, more effective fat loss. It's worth the effort.

2. Eat a high-fat, moderate-protein, low-carbohydrate diet. As I've written previously, carbohydrates will spike your glucose levels and lead to problems like chronic inflammation and insulin resistance… yes, even the darling so-called "heart-healthy whole grains" we've been duped into making the foundation of our diets.

Avoid them at all costs. Follow a diet high in healthy fats for the best results.

Most importantly, make sure to adjust your diet to contain more healthy fats before you engage in any kind of intermittent fasting. If you try to skip meals first, you run the risk of carb addiction getting the better of you, which will make for an unpleasant experience. For this food timing trick to work, you need a satisfied appetite, and eating fat creates one.

3. Exercise. We all know exercise can make us healthy, but why? Its ability to boost autophagy appears to be the major reason. During exercise, virtually every kind of tissue experiences a boost in lysosome activity.

Combine exercise, especially the kind described in ***Lightning-Fast Fat Loss***, with this food timing trick and you just might experience the most rapid fat loss of your life.

What to Avoid

Ten Foods You Should Never Eat

Now, you may be saying to yourself, "I get it. The American food system is broken. It puts profit ahead of the health of its citizens. But isn't the problem the same all over the world?"

Absolutely not! While the rest of the world is far from perfect, other countries do have regulations in place to protect their populations from the most egregious violations of food safety.

To illustrate that, here are 10 foods that are legal in the U.S. but banned elsewhere. Take a cue from "more civilized" nations — never eat these foods!

FOOD TO AVOID #1:

Farm-Raised Salmon

Wild-caught salmon is among the healthiest foods you can eat — but that's not the type that's commonly sold in American grocery stores and big-box chains. What you'll find in those places is flesh from flabby, sickly salmon raised in captivity and fed an extremely unnatural diet of grain — including GMO versions — along with liberal doses of antibiotics and other chemicals not shown to be safe for human consumption.

The only reason this salmon looks even remotely appetizing is that the sickly, captive fish is fed a synthetic red dye — one that has never been approved for ingestion by human beings.

For all of these reasons, farmed salmon are banned for sale in Australia and New Zealand.

Solution: Instead of this fish, seek out wild-caught salmon either fresh or in cans. A tip — salmon labeled "Alaskan" or "sockeye" is always wild.

FOOD TO AVOID #2:
Genetically Engineered Papaya

This tangy, delicious fruit, grown in Hawaii is now genetically engineered to resist a common virus. You've already read about the many problems caused by genetically engineered wheat and corn; there's no reason to believe that GM papaya is any better.

Consequently, the European Union has taken the prudent step and banned it.

Solution: Seek out organic papaya.

FOOD TO AVOID #3:
Meat That Contains Ractopamine

Ractopamine is a drug that turns ordinary livestock into muscle-bound mutants by boosting protein production. Like bodybuilders, the animals on this substance become lean and "cut" — even though current research indicates that the saturated fat in meat is actually just as important for human health as is the lean muscle tissue.

Ractopamine is used in about 45% of American pigs, 30% of ration-fed cattle, and an unknown percentage of turkeys. According to one estimate, up to 20% of ractopamine remains in the meat when you buy it from the supermarket.

Ractopamine in animals is linked to reductions in reproductive function, increase of mastitis in dairy herds, and increased death and disability. It also seems to affect the human cardiovascular system. It may cause hyperactivity, chromosomal abnormalities and behavioral changes.

Ractopamine is banned from use in food animals in — get ready for this — 160 countries! Even Russia has banned all U.S. meat imports and has stated it will continue to do so until American producers certify that the meat is ractopamine-free.

Solution: Seek out organic meat. When it comes to beef, find a variety that is both grass-fed and grass-finished. The "finished" designation matters because most cattle in the U.S. eat at least some free-range grass, but in the months before slaughter are confined to crowded, filthy feedlots and given a steady supply of GMO grains, growth hormones, antibiotics, and drugs like ractopamine to boost size and profits.

FOOD TO AVOID #4:
Flame-Retardant Drinks

Citrus-flavored sodas and sports drinks in the U.S. often contain a synthet-

ic chemical called brominated vegetable oil (BVO). Believe it or not, this stuff was originally patented by chemical companies as a flame retardant.

This nasty chemical accumulates over time in human tissue and breast milk, and animal studies have found it causes reproductive and behavioral problems in large doses. Bromine depresses the central nervous system and throws hormones out of balance.

It gets worse. In the body, bromine competes for the same receptors that are used to capture iodine. This can lead to iodine deficiency, a serious health hazard because it threatens proper thyroid function. Bromine toxicity can lead to skin rashes, acne, loss of appetite, fatigue, and cardiac arrhythmias.

Both the European Union and Japan have banned BVO.

Solution: Ban it from your life as well by avoiding all soft drinks — these liquid candy concoctions are perhaps the worst foods in the American diet even without BVO. The presence of this nasty chemical just gives you one more compelling reason to steer clear.

FOOD TO AVOID #5:
Foods With Artificial Food Colors & Dyes

A dizzying — in some cases, literally — 3,000 food additives are included in American processed foods. These preservatives, flavorings, colors, and other ingredients are especially common in foods targeted at young children — whose developing nervous systems are particularly vulnerable to their effects.

For example, boxed macaroni and cheese, cheddar flavored crackers, popular gelatins, and many cereals marketed to children contain Red 40, Yellow 5, Yellow 6 and/or Blue 2 — the most commonly used dyes in the U.S. These additives can cause behavioral problems as well as cancer, birth defects, and other health problems in laboratory animals. Red 40 and Yellow 6 are also suspected of causing a hypersensitivity reaction in children.

Sensibly, Norway and Austria have banned these food colors. And if you think they are essential, think again: American food companies use natural dyes such as paprika extract, beetroot, and annatto to comply with foreign regulations. So they can protect consumers when motivated to do so — but why bother when Americans don't seem to care?

Solution: Until these companies decide to take similar action here, ignore these packaged foods. In fact, ignore them anyway — make better, cheaper versions from scratch at home!

FOOD TO AVOID #6:
Arsenic-Laced Chicken

Incredibly, arsenic-based drugs are approved for use in animal feed in the U.S. Why? Because they make animals grow faster and their meat appear pinker, creating the illusion that old meat is fresh.

The Food and Drug Administration contends these products are safe because they contain "organic arsenic," which is less toxic than the other, inorganic form, which is a known carcinogen.

However, inorganic arsenic has been found in elevated levels in supermarket chickens, suggesting that organic arsenic can change form.

Several environmental groups have filed a lawsuit against the FDA calling for their removal from the market.

The European Union has banned arsenic-containing compounds in animal feed.

Solution: Purchase only organically raised chicken.

FOOD TO AVOID #7:
Bread With Potassium Bromate

"Bromated" flour contains potassium bromate, an oxidizing agent widely used in commercial baking — it strengthens and improves dough and promotes rising. Some brands of flour sold in supermarkets for home use contain potassium bromate.

Concerns about bromated flour go all the way back to 1982, when research suggested that the chemical causes several types of cancer in lab rats. For that reason, potassium bromate is considered "possibly carcinogenic to humans" by the International Agency for Research on Cancer, and bromated flour is banned by a number of governments including the European Union, Canada, Brazil, Peru, and China.

Solution: Steer clear of cheap, commodity baked goods, and when buying flour, check the ingredients — purchase only unbleached, unbromated versions.

FOOD TO AVOID #8:
Olestra/Olean

Synthetic fats are commercially produced substitutes for the real thing. They provide fewer calories or no calories at all. The best known of these is olestra, known by the trademarked name Olean. The FDA approved it for use in foods in 1996.

This synthetic oil passes through the digestive tract without being digested or absorbed. Sounds like the ultimate glutton fantasy — eat junk food endlessly, gain no weight.

But olestra hasn't worked out too well. Although it is still used in some potato chips and other snack foods, it never lived up to its initial commercial promise because it can cause intestinal cramps, gas, loose stools, and a particularly distressing condition with the mellifluous appellation "anal leakage." No wonder Time magazine termed it one of the worst 50 inventions in history.

Even without its disgusting side effects, this would be a useless product. Oddly enough, fat calories — from real fat — don't appear to be particularly "fattening." That's because the body deposits fat only in response to high circulating levels of insulin, and insulin production is driven by carbohydrate consumption. So if you eat plentiful fat and few carbs, you stay slim — even if the fat is real.

All the more reason no one needs this stuff. It's banned in the U.K. and Canada.

Solution: Avoiding it here is easy — American consumers never really embraced it, so it's a fairly rare commodity on store shelves. Just check labels — or better yet, eat food without labels — and eat real food that contains real fat.

FOOD TO AVOID #9:
Preservatives BHA and BHT

BHA (butylated hydroxyanisole) and BHT (butylated hydroxytoluene) are common preservatives, found in breakfast cereals, nut mixes, chewing gum, butter-substitute spreads, processed meats, dehydrated potatoes, and beer, among other foods.

BHA is known to cause cancer in rats, and may be a cancer-causing agent in humans as well. It may also trigger allergic reactions and hyperactivity. BHT may cause organ system toxicity.

It's banned in the U.K. for infant foods; it's also banned in parts of the European Union and Japan.

Solution: To avoid it, check ingredient labels and eat fresh — rather than packaged and processed — foods.

FOOD TO AVOID #10:
Milk and Dairy Products With rBGH

In a dairy industry awash in chemicals, this is the biggie: Recombinant

bovine growth hormone (rBGH) is the largest selling dairy animal drug in America.

It's a synthetic version of natural bovine somatotropin (BST), a hormone cows produce naturally. Monsanto (shocker) developed the recombinant version from genetically engineered E. coli bacteria.

Commercial dairy operators inject it into cows to increase milk production. But it may present multiple dangers to human health, including a possibility of increased risk for colorectal, prostate, and breast cancer.

It's also bad for the cows. Nonorganic dairy farms frequently have rBGH-injected cows that suffer at least 16 different adverse health conditions, including very high rates of mastitis that contaminate milk.

This misbegotten chemical is banned in Australia, New Zealand, Israel, the EU, and Canada.

Solution: Until it's banned here, seek out dairy products labeled "rBGH-free" or "No rBGH."

Five Poisons Allowed by the FDA

By now, you understand that the American grocery store is a minefield. But you are learning where the mines are on the shelves — and how to maneuver around them to the good stuff. How did the supermarket become such a dangerous place? Big Food's major accomplice in the theft of Americans' health has always been Big Government. And no government agency has more thoroughly thrown in its lot with corporate agriculture than the Food and Drug Administration (FDA).

Yes, the same agency that approved the myriad health stealing pharmaceuticals that are relentlessly hawked each night on television has also looked the other way as thousands of nightmarish chemical creations have been added to the foods many Americans eat daily. Here are five poisons that the FDA has decided are perfectly safe for your and your family's meals:

FDA APPROVED POISON #1:
Monosodium Glutamate (MSG)

Purified, crystalline MSG has been around since 1909. Originally patented and marketed by a Japanese company, it is added to Asian dishes because it stimulates a particular taste receptor, the one responsible for the so-called "fifth taste" (in addition to sweet, sour, salty, and bitter). The official name

for the receptor and taste is umami, a Japanese word meaning "meaty" or "savory."

Dr. Russell Blaylock, a neurosurgeon, highlighted MSG in his book Excitotoxins: The Taste That Kills. He explains that MSG is a classic excitotoxin, which means it stimulates cells to the point of damage or death. Brain cells are particularly vulnerable. Dr. Blaylock shows how MSG causes brain damage and may ultimately lead to learning disabilities, Alzheimer's disease, Parkinson's disease, Lou Gehrig's disease and more.

According to Dr. Blaylock, MSG also carries cardiovascular risks. There are glutamate receptors in the heart's nervous system and the heart muscle itself, potentially interrupting regular heartbeats and even causing sudden death. Young athletes, after a session of extreme exertion, often deplete their stores of magnesium, making them particularly vulnerable to death from arrhythmia.

Solution: To avoid MSG or other similar glutamates, check labels carefully. The FDA requires labels to list MSG as well as other glutamic acid salts, including monopotassium glutamate and monoammonium glutamate. Avoid them all.

FDA APPROVED POISON #2:

Aspartame is an artificial sweetener — brand names are Equal and NutraSweet — that also appears to be an excitotoxin. Research suggests it may cause nerve damage.

Even if it were safe — which it is not — artificial sweeteners have never been demonstrated to do what they are supposed to do, which is help people limit caloric intake and lose weight. The reason is that the sweet-taste signal alerts the brain to expect highly caloric food. When such food is not forthcoming, hunger ramps up, and people typically eat more highly caloric food to compensate.

Solution: Avoid aspartame, and artificial sweeteners of all kinds.

FDA APPROVED POISON #3:

Hydrogenated Oils are added to food to increase shelf life, and are also found in crackers, cookies, salad dressings, and bread. The oils are made by bubbling hydrogen gas into vats of liquid vegetable oil — as the hydrogen binds to the oil's free carbon atoms, it solidifies.

But this process creates trans fats, which have been shown to contribute to increased risk of cardiovascular disease.

The good news is that recent legislation has severely curtailed the use of

trans fats in foods. It's actually becoming difficult to find a food label in America that contains a listing for hydrogenated or partially hydrogenated oil.

But here's a special note of caution. In her new book, The Big Fat Surprise: Why Butter, Meat, and Cheese Belong in a Healthy Diet, science writer Nina Teicholz reveals an unexpected downside of the trans fat ban: Deep-fried food may now be even less healthy!

The reason? While trans fats are unhealthy, they are also relatively stable when heated. Conversely, polyunsaturated, nonhydrogenated soybean oil is incredibly unstable, quickly degrading and oxidizing when heated. That means old deep-fat fryer grease — like the stuff boiling away at your local Burger Hut — is now possibly even more inflammatory than it was when the fat was filled with melted Crisco!

Deep-fat fryers should use beef tallow, as they did back in the 1960s — it's by far the best, healthiest choice. But until sanity returns to the world of cooking oils, tallow is banned as "artery-clogging," though there is no evidence it has ever clogged an artery.

Solution: Avoid hydrogenated oils and foods deep-fried in their replacement, nonhydrogenated soybean oil.

FDA APPROVED POISON #4:

Sodium Nitrate is found in processed meats such as bacon, ham, corned beef, hot dogs, and much more.

University of Hawaii research indicates that consuming processed meats increases the risk of pancreatic cancer. An analysis of the eating habits of nearly 200,000 men and women for seven years revealed that those who consumed the most processed meats had a 67% increased risk of pancreatic cancer over those who consumed little or no meat products.

The possible culprit? Sodium nitrate. However, there is conflicting research here, and some researchers argue that the link between this preservative and cancers of any kind has never been shown definitively.

Solution: Have some bacon now and then — the saturated fat is good for you — but generally, stick to unprocessed meats.

FDA APPROVED POISON #5:

High Fructose Corn Syrup (HFCS) is one of the major drivers of the obesity epidemic.

It's a surprisingly recent invention, dating back to Japan in the late 1960s. It entered the American food system in the early 1970s, and is now found in processed foods ranging from salad dressings and ketchup to

jams, jellies, ice cream, and many others.

Now, it's everywhere. Americans today take in an average of 55 pounds per year — an estimated one-sixth of daily calories!

There are two horrors here.

First, HFCS is incredibly cheap to make, which has given American food processors the option of inserting it into literally thousands of foods, some of which are not typically sweetened — canned soup, for example. This "ratchets up" consumers' taste buds to require more and more sweetener to get the sweet effect — making virtually any unsweetened food seem bitter and unpalatable.

Second, some evidence suggests that fructose, unlike glucose, doesn't trigger the process by which the body tells us it is full. This is why it's possible to drink can after can of high-calorie, insulin-spiking HFCS-sweetened soft drinks and never feel the smallest decrease in hunger.

Solution: Don't consume anything that has HFCS as an ingredient. Bad as this sweetener is, other ingredients in foods that contain it are also likely bad, as HFCS is used only in the cheapest, lowest-quality foodstuffs.

CONCLUSION

We hope this excursion through the dark passages of American food culture has not discouraged you.

Sure, there's a great deal wrong with the industrial food complex. And yes, sometimes it's difficult to avoid its toxic output.

But the enduring marvel of America is that the polluting and degradation of mass-market food has been accompanied by strong growth of a healthy, vibrant alternative — local farmers' markets.

According to the USDA, there are now more than 8,000 farmers markets in the U.S. — up from 5,000 in 2008. That's massive growth in a mere six years!

Similarly, natural foods retailer Whole Foods has formally announced that by 2018, every product in every store will be labeled to indicate whether it contains genetically modified organisms.

Along with giving consumers the right choose non GMO products, labeling should also have a "chilling" effect on the proliferation of GMO products in general. If labeling leads to lowered GMO sales, market forces will lead farmers and food processors to go back to planting and using non-GMO crops and ingredients.

In other words, there's reason for hope.

Enjoy this guide, and use it in health. And let's all keep working for the day when guides like this are no longer needed!

Liquid Poison Exposed:

Avoid This Insidious Fat-Gainer

If you're trying to lose weight, there's one thing in your diet that you should eliminate, without question.

In fact, this beverage is so dangerous that I refer to it as "liquid poison."

The problem is this particular poison seems to be an integral part of our national identity. It's as big a part of Americana as apple pie and fireworks on the Fourth of July. The biggest brands dominate our commercials and billboards, selling their poison as the key to happiness and refreshment.

I'm talking about soda.

In 2001, Americans gulped down 135% more of this poison than in 1977, an increase that's in near-perfect lock step with our obesity epidemic. The good news is a study looking at our consumption from 1999–2010 showed a slight trend down. The bad news is it didn't also count fruit juices, which can spike blood sugar as much as soda. And it didn't count "energy drinks," which are nothing more than highly caffeinated soda.

So overall, sweet, unhealthy drinks remain on the rise.

But let's keep the focus on classic sweetened soda, which is still consumed at the horrifying rate of 44 gallons per American annually.

A little-known study showed this liquid poison can start jacking up your weight in just three weeks. Another showed adding soda into your diet can cause a three-pound weight gain in 10 weeks. These numbers might not seem significant, until you consider these effects are due to soda alone, *without any other diet changes*.

In other words, it's strong enough to wreak havoc all on its own.

Another study showed it causes more weight gain than stuffing your face with the same number of calories from jelly beans… *jelly beans*! Think of it this way:

Every time you drink soda, you might as well be programming your DNA to transform your body into a fat-storing machine.

Don't be dramatic, you might be thinking. I drink only diet soda — there are no sugar and no calories in a diet soda!

You're right about that. But what they use to replace the sugar and calories is even worse.

Prevention cites a University of Minnesota study of 10,000 adults which found that "even just one diet soda a day was linked to a 34% higher risk of metabolic syndrome, a group of symptoms including belly fat and high cholesterol that put you at risk for heart disease." Diet soda also has been linked to kidney disease and reproductive issues.

Overall, it appears that the artificial sweeteners in soda are at least as bad for you as actual sugar.

This secret might seem a little basic or obvious to some folks. But I'm compelled to include this guide because Americans are *still* consuming an insane volume of soda.

When I'm feeling unusually masochistic, I stroll down the soda aisle in a supermarket, just to get a feel for the sugar-soaked metabolic nightmares disguised as innocent groceries.

They shouldn't even exist. Because the correct amount of soda every man, woman and child on this planet should drink for health is:

0
Zilch.
Nada.
As in . . . never again!

STEPS TO FREEDOM

Perform an exorcism on your kitchen. Pour all soda down the drain as if you were an addict determined to go straight (which may be close to the truth). Don't feel any guilt for wasting it, because it has no food value whatsoever.

If soda's currently in your diet, eliminating this single item will make it far easier to drop fat from your body.

Replace it with water or unsweetened green or black tea for hydration. You can also have a cup of coffee or two daily — it's rich in antioxidants and may also accelerate your metabolism, making fat burning a little easier. You can put some half and half in it, but skip the sweeteners!

That's it. No juice. No energy drinks. No sweet liquids of any kind.

Don't make the mistake of replacing one sugar bomb for another.

You might feel symptoms of withdrawal… which should give you a hint of how horrible this stuff is for your health. I assure you, those pains will pass, and you'll feel (and look!) better for it.

Natural Food Flavors Exposed:

Why Hidden Ingredients Impact Your Fat Loss and How to Avoid Them

I come from a long line of Oregon farmers and cattle ranchers, and I vividly recall how up until the 1960s, mixed-use family farms rotated cattle, grain, and vegetable crops with a nitrogen-fixing cover crop. This sustainable system kept soil fertile and delivered a healthy level of nutrients to the plants and animals.

I must emphasize "vividly recall" because your average modern-day food production Goliath bears little resemblance to the sort of farm we picture when we think of the word.

Studies show today's foods contain a mere fraction of the vitamins and minerals they did over 50 years ago. That's problem No 1.

Problem No. 2 is our convenience-worshiping culture, which has virtually eliminated home cooking in favor of canned, frozen, shrinkwrapped, or otherwise highly processed prepackaged foods.

Trouble is, these ready-made meals must taste good for people to come back for more, even though the processing usually strips any semblance of a pleasing flavor from the original ingredients. And when the crops themselves are virtually tasteless to start with because they are grown in nutrient-depleted soil, chances are slim the resulting product will taste better than drywall spackling paste.

Enter "natural flavors."

Look on any processed food's ingredient label and chances are you'll see that reassuring but intentionally vague term. The reality is these additives are anything but natural, and (indirectly, at the very least) they can ruin your fat-loss efforts.

If you want to do everything possible to ensure your fat-burning success, you must eliminate these additives from your diet. This guide will reveal:

- Exactly what they are…
- Where they're hidden…
- And how you can avoid them successfully.

The first thing that you should know is that if food declares itself to be "low-sugar," "low-sodium," or "fat-free," artificial flavors have almost certainly been added to replicate the taste of the real sugar, salt, or fat that's been removed.

But that's no problem, right? After all, the replacement is "natural flavoring," suggesting it's at least as healthy as the natural stuff that's been processed out. While the phrase might lead you to believe these are simple, healthy additions — an extra dose of garlic or cinnamon, for instance — the reality is actually quite disgusting.

According to the FDA's Code of Federal Regulations:

The term natural flavor or natural flavoring means the essential oil, oleoresin, essence or extractive, protein hydrolysate, distillate, or any product of roasting, heating or enzymolysis, which contains the flavoring constituents derived from a spice, fruit or fruit juice, vegetable or vegetable juice, edible yeast, herb, bark, bud, root, leaf or similar plant material, meat, seafood, poultry, eggs, dairy products, or fermentation products thereof, whose significant function in food is flavoring rather than nutritional.

OK, got it? No? Don't worry, neither did I the first five or six times I tried to decipher it.

The take-home message is: Natural flavors are not always natural, and more often than not have little to do with the taste of the natural ingredient they're trying to emulate.

The FDA does not require manufacturers to list the ingredients in their "natural flavoring," so exactly what you're eating can be difficult to determine. For example, many "natural" raspberry flavors include castoreum, which is a yellow secretion beaver glands release along with urine to mark their territory. Not exactly what comes to mind when you think of raspberries, is it?

(Of course, while the FDA is loose as a goose in this realm, they're quite strict when it comes to outlawing the sale of milk in its natural, unpasteurized form. Nice guys, huh?)

What's more, these flavors can be quite addictive, leading you to crave and eat more than you normally would. Let's look at artificial sweeteners as an example.

Widely used in sports and energy drinks, along with sodas, sweeteners like aspartame have become a large part of the American diet.

Unfortunately, despite being labelled as "natural" flavoring, aspartame is essentially toxic. The secret lies in methanol, which makes up about 10% of aspartame. Methanol is converted to formaldehyde when it crosses the blood-brain barrier and can cause migraines, brain damage, vision problems, birth defects, and much more.

Aspartame is promoted as a healthy alternative to sugar and is used in diet sodas and sports drinks to promote weight loss. However, a study out of the University of Toronto, as well as many others, has shown that beverages with aspartame actually increase appetite.

Why? Because taste and appetite work together in an elegant way. When you take a big swig of aspartame-sweetened soda, your metabolism immediately begins to anticipate a huge influx of calories. After all, for over a million years of evolution, the taste of sweetness has always been followed by a flood of carbohydrate, which the body handles by ramping up insulin production.

When you consume noncaloric sweetener, this ancient system is thrown completely out of whack. When a sweet taste is followed by zero calories, you begin to immediately crave calories in any form, from any source, to satisfy the intense craving.

Little wonder that no credible study has ever found that diet soda assists with weight loss.

Monosodium glutamate, usually called MSG, is a neurotoxin with known dangerous health effects and a profound impact on obesity, and is also an ingredient masked by the "natural flavor" title. Just another case of the food industry choosing profits over safety.

This, however, only scratches the surface of so-called "natural" flavoring affecting your health and weight.

For decades, clever scientists have been studying the subtleties of food flavoring. They had to. As I pointed out before, whenever a processed food is created and stuffed into a bag or box and stabilized to spend months on a shelf, many of the assembled elements lose their natural flavor.

So (naturally) food companies scrambled to add this flavor back in, using concentrated extracts in specific dosages.

But why stop there?

As long as they were adding in flavoring agents, these food companies took the next logical (for them) step: manipulate the ratio of various flavoring agents to make it virtually impossible for you to stop eating.

With the right addictive flavor, minus the healthy fats or complex carbs that might actually satisfy you, these scientists cracked the code on getting you to crunch through an entire bag of puffs, curls, or chips without even realizing it!

An excellent expose on this natural flavoring fraud is detailed in an episode of 60 Minutes called "The Flavorists," in which an all-too-agreeable Morley Safer ambles along with the professionals as they demonstrate, step

by step, exactly what they do, and how.

They are, in their own words, trying to make eating a "memorable" and "addictive" experience. It's their goal to make you want more. They design the flavors to be powerful but not linger too long, so that you keep going back for another taste.

So while the flavoring agents themselves don't make you fat, the carb-intensive foods to which they are added to. Without these flavorings, you wouldn't have any problem putting down a bag of chips unfinished. In fact, you'd never take more than one bite.

STEPS TO FREEDOM

So how to avoid these decidedly unnatural flavors?

It's not easy… but the results are worth it.

Start by looking at the ingredient label.

In the words of Morley Safer, "Most of the wrong stuff we eat comes in a bottle, a can, or a box — food that's been processed. Much of that food has been flavored. The flavoring industry is the enabler of the food-processing business, which depends upon it to create a craving for everything from soda pop to chicken soup."

Most ingredient labels disguise this deception by simply listing "natural flavors." Even seemingly healthy brands contain this mystery element.

So remember: There's no free lunch, flavored or otherwise. Convenient, prepackaged foods come with a price in the form of addictive additives.

If you want real fat-loss results, you must stick to eating real foods.

In the past, this was all but impossible, considering most of the hearty, filling natural foods were banished to the government's "foods to minimize" list. Actually, they still are, but now you know better.

That's the big picture. But here are some more specific pro tips to make all this easy:

1. Eat foods that don't have labels at all, like produce and fresh organic meat.

2. If you must eat something labeled, avoid anything with more than seven ingredients, words you don't recognize, or the term "natural flavors."

3. Avoid anything labeled "diet," "low-fat" or "low-sugar," since the substitutes for those sugars and fats are often worse than what they replace.

SEVEN FOODS YOU SHOULD NEVER EAT

"Never" is a strong term, but I use it here deliberately. With literally thousands of delicious whole, unprocessed foods to enjoy, there's simply no reason to ever consume any of these:

1. **Regular soda:** This is the worst commonly consumed item in the American diet. Studies consistently link soda consumption — even at just one can a day — to increased risk of obesity, Type 2 diabetes, and heart disease. Optimal hydration and other health benefits come from drinking water, unsweetened green tea (iced or hot), coffee, and a nightly glass of wine.

2. **Artificial sweeteners:** Known technically as non-nutritive sweeteners, many forms have been shown to increase appetite, which makes perfect sense: A million years of evolution has conditioned our bodies to expect an influx of calories immediately following the sensation of a sweet taste. When those calories don't arrive, insulin — and then hunger — spikes, and we end up eating more calories than we avoid by consuming the artificial sweetener. A study published in March 2015 showed that among people 65 and older, regular consumption of artificially sweetened diet soda led to significant increases in abdominal fat. Furthermore, researchers at Princeton discovered that "all sweeteners are not equal when it comes to weight gain." High fructose corn syrup topped the list by far, causing rats to gain significantly more weight than those who were given table sugar. The same weight gain was not seen in any other scenario, including a high-fat diet. High fructose corn syrup, so often used as a "diet" alternative to sugar, is doing more harm than good.

3. **Undiluted fruit juice:** Often regarded as more healthful than soda, the fact is that, metabolically, fruit juice has roughly the same effect — it spikes insulin and drives weight gain. The modest amount of vitamin C in natural juices does not compensate for this effect. Eat whole fruit, and don't drink fruit juice.

4. **Isolated soy protein foods (such as vegetarian "hot dogs"):** I am not a fan of soy foods in any form, but whole fermented soy products — such as soy sauce, natto, miso, and tempeh — appear to be relatively benign, especially when eaten in modest amounts.

Isolated soy protein is much more problematic — extracted with acids and then neutralized with an alkaline wash, soy isolate is often high in both toxins and anti-nutrients (substances that inhibit the body's ability to incorporate proteins, vitamins, and minerals). Worse, virtually all soy grown in the U.S. is genetically modified and heavily sprayed with pesticides.

5. **Deep-fried food:** Restaurants typically use the same fryer oils for many days. But prolonged heating degrades the oil and renders it highly pro-inflammatory. Recently — in a nod toward making fried food more "healthy" — some fast-food operations have switched from hydrogenated oils to pure polyunsaturated oils in their deep fat fryers. But bad as hydrogenated oils are, polyunsaturated oils are perhaps even more dangerous when heated, as they are profoundly chemically unstable and prone to rapid oxidation.

6. **"Hyperpalatable" snacks:** These are typically packaged, bite-sized creations in which the grain is entirely stripped of fiber and the remaining starch is "exploded" under heat and a quick release of pressure. A perfect example is "cheese puffs," which are offered in baked and fried versions. These are nutrient-poor, inflammatory, and insulin-spiking and offer no satiety (a feeling of fullness) whatsoever. In other words, they are engineered to promote overeating.

7. **Fast foods in general:** The problem here is not necessarily the category of food itself — virtually all fast-food operations offer salads, for example — it's the overall quality. Every ingredient in every item fast-food chains sell is suspect because the imperative is to secure it as cheaply as possible. This means fast food typically contains lots of cheap additives and fillers.

In his book In Defense of Food: An Eater's Manifesto, writer Michael Pollan offers a useful concept to help us avoid eating any of these highly processed industrial concoctions. He terms them "food-like substances" — in other words, substances that resemble food but are distinct from actual food.

I endorse this distinction. You are under no obligation to classify these overprocessed and denatured substances as "food," because they quite literally don't deserve that designation. Once you internalize this idea, avoiding all of them becomes easy and, ultimately, effortless.

Delicious... but Toxic

Yes, Most People Love Them — but Here's Why Grains Are Unhealthy

Apart from maintaining social conventions in certain situations and obtaining cheap sugar calories, there is *absolutely no reason to eat grains*. Believe me, I've searched far and wide and asked everyone I can for just one good reason to eat cereal grains. But no one can do it. They may have answers, but they just aren't good enough. For fun, though, let's see take a look at some of the assertions.

"YOU NEED THE FIBER!"

OK, for one: No, I don't. If you're referring to its oft-touted ability to move things along in the inner sanctum, fiber has some unintended consequences. A few years back, scientists found that high-fiber foods "bang up against the cells lining the gastrointestinal tract, rupturing their outer covering," which "increases the level of lubricating mucus."

Err, that sounds positively awful. Banging and tearing? Rupturing? These are not the words I like to hear.

But wait! The study's authors say, "It's a good thing." Fantastic! So when all those sticks and twigs rub up against my fleshy interior and *literally rupture my* intestinal lining, I've got nothing to worry about. It's all part of the plan, right?

Somehow, I'm not convinced that a massive daily infusion of insoluble grain fiber is all that essential.

And that "lubricating mucus" sounds an awful lot like the mucus people with irritable bowel syndrome complain about. From personal experience, I can tell you that once I completed my exodus from grains, the IBS completely stopped. If you're not yet convinced on the fiber issue, I'll refer you to Konstantin Monastyrsky's terrific book Fiber Menace. Anyway, there's plenty of fiber in the vegetables and fruit I eat. Which takes me to the next claim.

"YOU NEED THE VITAMINS AND MINERALS!"

You got me. I do need vitamins and minerals, like B-1 and B-2, magnesium and iron, and zinc and potassium. But do I need to obtain them by eating a carb-heavy, bulky grain? No, no I don't. You show me a serving of "healthy whole grains" that can compete — in terms of nutrients, vitamins, and minerals — with a meal I call the "Big Ass Salad". What's that? Can't do it? Thought so.

"TOXIC ANTI-NUTRIENTS? DO TELL."

Living things generally do not want to be consumed by other living things. Being digested, for the most part, tends to interrupt survival, procreation, and propagation of the species — you know, standard stuff that fauna and flora consider pretty important.

To avoid said consumption, living things employ various self-defense mechanisms.

Rabbits, for example, with their massive ears, considerable fast-twitch muscle fibers, and nasty claws, can usually hear a predator coming, outrun (outhop?) nearly anything, and (in a pinch) slash a tender belly to shreds. Blue whales are too big to fit into your mouth, while porcupines are walking reverse pincushions.

The point is animals have active defense mechanisms. They run, fight, jump, climb, fly, sting, bite, and even appeal to our emotions (if you've ever seen a puppy beg for a treat with sad eyes, you know that isn't just accidental cuteness) in order to survive. All the while, predators are constantly evolving and generating adaptations.

Plants, though, are passive organisms without the ability to move, think, and react (for the most part).

They must employ different tactics to ensure propagation, and they generally have to rely on outside forces to spread their seed. And so various methods are "devised" to dissuade consumption long enough for the seed to get to where it's going.

Nuts have those tough shells, and grains have toxic anti-nutrients: lectins, gluten, and phytates.

Lectins are bad. They bind to insulin receptors, attack the stomach lining of insects, bind to human intestinal lining, and seemingly cause leptin resistance. And leptin resistance predicts a "worsening of the features of the metabolic syndrome independently of obesity."

Gluten and phytates are no better. Gluten can cause intestinal permeability (punch holes in the gut, allowing food particles to enter the bloodstream. The body interprets these as invaders, ramping up inflammation in response). And phytates interfere with the body's ability to absorb essential minerals. Fun stuff, huh?

We do not need grains to survive, let alone thrive. In fact, they are naturally selected to ward off pests, whether they be insects or hominids. I suggest we take the hint and stop eating them.

Cooking the Books for Profit (And Not Your Health)

Previously Unpublished Data from a Decades-Old Study Shows This "Healthy Fat" is in Fact Deadly

Generally, I steer clear of tinfoil hat conspiracy tales.

But here's a startling and quite credible story from the world of nutrition research that suggests either an idiotic omission or a sleazy coverup — one that every American who cares about his or her health should know about.

It was revealed by none other than the National Institutes of Health.

First, a bit of background. One of the most common modern foods is "vegetable oil." It's in fast food, commercial baked goods, chips and more.

Sounds lovely. Vegetables are good for us, right? Indeed, they are, especially organic, leafy green varieties.

But "vegetable oil," the familiar golden yellow liquid sold in the plastic bottle, is a marketing euphemism for soybean oil — or, to be more precise, GMO, glyphosate-pesticide-soaked, heat-and-solvent-extracted soybean oil.

Doesn't sound so lovely…

A NEW, STRANGE FOOD

Soybean oil as a commercial foodstuff was introduced to the West roughly a century ago and has only several hundred years of use in Asia, which means we have virtually no evolutionary history with it. That's reason enough to regard it as suspect when it comes to health.

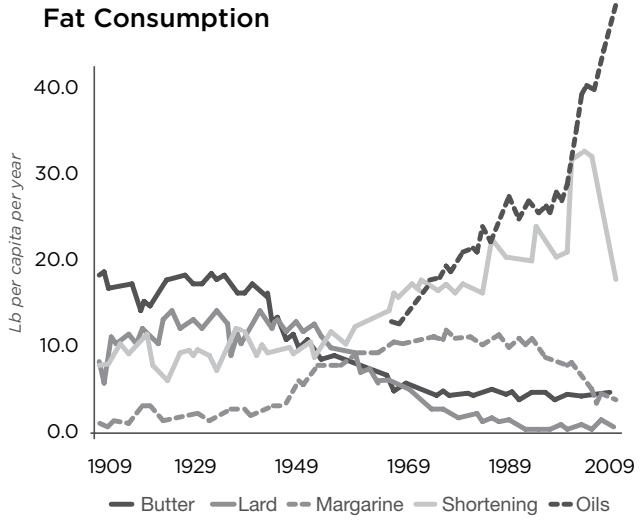
Similarly, other industrial seed oils — canola, corn, safflower, sesame and sunflower oils — are also recent innovations, ones that require toxic-based, high-tech processing methods to extract.

But to Big Food, these new forms of fat have a fabulous advantage over the traditional types of fat that nourished human beings for millennia — they are insanely cheap to grow and manufacture compared with traditional cooking fats such as butter, lard and coconut oil. That's why their use has skyrocketed.

Now, some mainstream health authorities, especially the American Heart Association, continue to insist that this type of oil is good for your heart. As its website proclaims:

"The American Heart Association recommends cooking oils lowest in

saturated fats, trans fats and cholesterol — such as canola oil, corn oil, olive oil [the only decent oil in the list], safflower oil, sesame oil, soybean oil and sunflower oil."



BUT CONSIDER THIS…

A team of researchers from the National Institutes of Health and the University of North Carolina dug into previously unpublished data from a gigantic, decades-old study called the Minnesota Coronary Experiment.

The documents were found in a dusty box in the home basement of Dr. Ivan Frantz Jr., one of the original researchers in the study. As *The New York Times* explained:

Dr. Frantz, who died in 2009, had been a prominent scientist at the university, where he studied the link between saturated fat and heart disease. One of his closest colleagues was Ancel Keys, an influential scientist whose research in the 1950s helped establish saturated fat as public health enemy No. 1, prompting the federal government to recommend low-fat diets to the entire nation.

Got that? Dr. Frantz was in league with the infamous Ancel Keys, whose "research" consisted of dodgy pro-carb, anti-fat data that has sickened and shortened the lives of millions worldwide.

But Dr. Frantz's study wasn't about carbs versus fat, but rather one type of fat versus another. It compared the heart disease risks of eating butter versus vegetable oil.

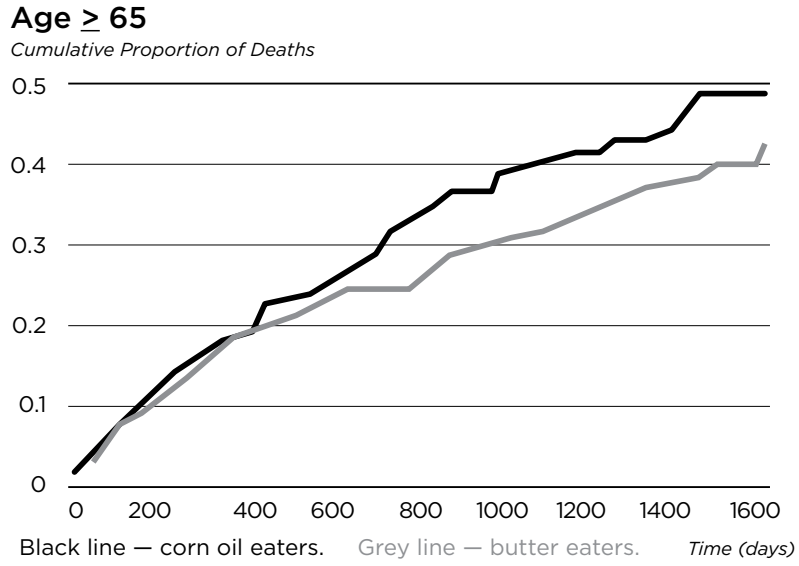
Half of his study's participants ate meals rich in saturated fat from butter and other sources. The rest ate a diet in which the saturated fat was replaced with highly unsaturated corn oil.

A BLAST FROM THE PAST

The trial took place from 1968–73 and included 9,000 people at Minnesota mental health and nursing home hospitals. Due to legal and ethical concerns, a huge trial like this would be impossible today.

Dr. Frantz and the study's other authors concluded that there was "no differences between the treatment and control groups… for cardiovascular events, cardiovascular deaths or total mortality."

But the new analysis, published in BMJ (which is the source of lots of good nutrition info these days, as the U.K.'s medical journals are not bought and paid for like many in the U.S.), found that even though the seed oil reduced cholesterol levels, people who ate it had a 15 percent higher risk of death compared with the butter eaters.



Result: The butter eaters had higher cholesterol, but lived longer.

In other words, this latter-day analysis strongly suggests those researchers of 40 years ago cooked the greasy books.

A PATTERN OF DECEPTION

Sadly, this wasn't an isolated event. A re-evaluation of a similar Australian study from 1966–73 also revealed — shocker — seed oils are actually bad for your life span.

Exactly why these conclusions weren't released 40 years ago isn't known. But what's clear today must have been equally clear then — they weren't published for a reason.

Perhaps — and I don't think a tinfoil chapeau is required here — it was because the profit potential of these toxic oils was just too high and no one wanted to rock the boat.

Whatever the reason, it's sobering to imagine how much better Americans' health might be today if these conclusions had not been covered up.

In fact, while many are now waking up to the dangers of copious sugar and wheat flour in the standard American diet, I am increasingly persuaded that these industrial seed oils are the most destructive commonly consumed foods of all.

Seed oils may indeed lower cholesterol levels, but they do not lower death rates — because, as I've pointed out for decades, lowering cholesterol may slightly drop heart attack risk for some people, but it raises risk of death from other causes, especially cancer.

BOTTOM LINE

It is absolutely vital for your own health and the health of your loved ones to avoid industrial polyunsaturated seed oils as much as you possibly can. Here are three ways to do so:

1. **Avoid eating in fast-food restaurants,** where the deep-fat fryer — full of seldom-changed, highly oxidized, inflammatory soybean oil — coats foods with obesity-causing, carcinogenic compounds.

2. **Avoid processed baked goods from the grocery store,** which typically use this cheap fat as shortening.

3. **Never, ever, purchase a bottle of "vegetable oil."** Similarly, never buy canola, corn, safflower, sesame or sunflower oils for home use. If you currently have any of these in your cupboards, pour them down the drain. Instead, begin using more saturated oils including olive oil or, best of all, coconut oil, nonhydrogenated lard

(Fatworks brand is wonderful) and clarified butter (also known as ghee) for your cooking needs.

You don't have to be nuts to believe that conspiracies are sometimes real. But you do have to be crazy not to change course once the truth is revealed. I promise to keep on top of this situation and diligently provide the latest information on the foods — including fats — associated with robust health.

Wheat Fields Swimming in Toxic Herbicides

Forget Gluten: Here's the Real Reason to Avoid Wheat

It's ironic that I'm writing this wheat-bashing article, as my family has more than a century of intimate experience with growing and harvesting wheat.

I grew up in the wheat fields of Eastern Oregon, with the dry, slightly burnt smell of fresh-harvested wheat in my nose and my socks full of chaff.

So I'm an odd candidate for the job of criticizing wheat consumption, as my family's fortunes depend on the stuff.

But the fact is that lots of people are having trouble with wheat these days. It makes them sick. When they eat it, their joints ache, their bowels rebel, their minds become "spacey."

Why?

In this article, I won't pretend to provide the definitive answer, and I suggest skepticism toward anyone who claims to have one. It's an extraordinarily complex question.

However, I'll lay out a *strong possibility* for the cause of the harmful effects, based on both extensive research and personal knowledge of modern wheat and how it is harvested.

ELIMINATING THE USUAL SUSPECTS

First, gluten — a special mix of proteins found in wheat that provides bread's chewy texture — can be a problem for some people.

But it's highly unlikely that a huge percentage of the population has suddenly developed celiac disease, a genetic intolerance for wheat. I suspect true celiac incidence is probably where it has traditionally been — affecting slightly less than one percent of the population.

Further, wheat grown in the U.S. is not genetically modified, so GMO intolerance can't be the issue. Modern wheat has, however, been vigorous-

ly hybridized, and it's possible this has made it harder to digest for some people.

But here, I think, is the real issue: It's a common practice in U.S. wheat production to drench fields with the toxic herbicide glyphosate (the main ingredient in the pesticide Roundup) just a few days before harvest.

The purpose is to dry out and kill the wheat plants so the harvesting combines can move more quickly and easily through the fields.

Wheat farmer Keith Lewis recently had this to say about this last, late-season spraying:

This practice is not licensed. Farmers mistakenly call it "desiccation." Consumers eating products made from wheat flour are undoubtedly consuming minute amounts of Roundup. An interesting aside, malt barley which is made into beer is not acceptable in the marketplace if it has been sprayed with pre-harvest Roundup. Lentils and peas are not accepted in the marketplace if it was sprayed with pre-harvest Roundup… but wheat is OK… This farming practice greatly concerns me and it should further concern consumers of wheat products.

This late-season crop-kill with glyphosate has been common since the late '90s. That roughly corresponds with widespread reports of health effects from eating wheat.

While Roundup maker Monsanto and others contend that glyphosate has low toxicity for humans, more recent research suggests it disrupts beneficial gut microbes — the ones that make crucial amino acids. The result is, potentially, a variety of negative health effects, from increased autoimmunity to joint inflammation to depression.

SO WHAT SHOULD YOU DO?

First, it's important to realize that *no one needs to eat any grains*. Wheat, corn, rice, and the like represent cheap, nutrient-poor, lipogenic (fat-forming) carbohydrate calories.

But if you wish to consume wheat, I suggest trying organic Einkorn wheat, which has two advantages — it has not been endlessly hybridized, and it is free of glyphosate contamination. It is still a source of easily digested, fat-forming carbohydrates, but taken in moderation in the context of an active life, that's unlikely to be a big problem.

I've had bread made with this wheat. It is absolutely delicious. Not enough to make me renounce my grain-free lifestyle — but almost!

The Real GMO Problem

Why You Need to Avoid Conventionally Raised Food

Pretty much everyone, I hope, has heard of genetically modified organisms, also called GMOs. And pretty much everyone, I hope, knows that they are now a major part of the American food supply.

Specifically, about half of all crops planted on American farmland are genetically modified, including 85% of corn and 91% of soybeans.

Most people, however, can't say why this situation might be dangerous, beyond the idea that splicing genes from one species into another is "unnatural."

That's true enough, but here's the fundamental issue — what's the goal of creating GMOs? If it is boosting nutrition content, that worthwhile aim might be worth at least considering (though even here, there are likely downstream consequences that need thorough, long-term research).

But that goal is virtually never on Big Food's GMO agenda. The first and most common reason companies re-jigger genomes is to help plants resist applications of potent herbicides, especially one called glyphosate (GLY-foe-sate), the key ingredient in Monsanto's Roundup.

The first glyphosate-resistant GMO crop, soybeans, came out in 1996. Resistant strains of corn, canola, alfalfa, cotton and sorghum are now common. GMO wheat is under development, but today, even non-GMO wheat is doused with glyphosate.

The touted advantage is that farmers can just spray it on and the crop lives while the weeds die, making harvest quick and efficient. In a few days, the glyphosate is said to break down into harmless compounds.

Unfortunately, every detail of this official narrative is suspect. Consider that glyphosate is:

- **Everywhere in the environment:** Paul Capel, an environmental chemist and head of the agricultural chemicals team at the U.S. Geological Survey Office, reported in 2011 that glyphosate was found in every stream sample examined in Mississippi in a two-year period. "This study is one of the first to document the consistent occurrence of this chemical in streams, rain, and air throughout the growing season," he told the news agency Reuters. "It is used so heavily and studied so little"

- **Inside human beings:** In the first-ever test of glyphosate in human breast milk, "high" levels were found in three of 10 American sam-

ples tested. In Europe — where officials conduct far more studies, even though glyphosate use is lower — a 2012 study found the stuff in every urine sample it took in Berlin; another study found it in the urine of citizens in 18 countries. Such results suggest glyphosate bio-accumulates over time in tissues, despite industry assertions to the contrary

- **Probably harming us:** Glyphosate works by disrupting a metabolic process called the shikimate pathway, which is absent in all animals — that's why its makers claim the poison is harmless to humans. But this pathway is found in bacteria, including the trillions of beneficial microbes in your gut. According to Massachusetts Institute of Technology researcher Dr. Stephanie Seneff, glyphosate is hardest on the most beneficial bacteria in your internal ecosystem. Suppressing those good bugs, she says, appears to allow pathogens to proliferate, leading to ramped-up inflammation and a host of chronic diseases

- **Not even known to work:** Glyphosate-resistant "superweeds" are rendering these toxic sprays useless.

A *New York Times* article describes how farmers were going back to weed-control techniques like plowing, as fast-growing spray-immune mutants like pigweed take over their fields. One agricultural scientist called the situation "Darwinian evolution in fast-forward"

- **About to become more toxic:** To overcome superweeds, Dow Chemical has created "Enlist Duo." It combines glyphosate with 2,4-D, a component of the Vietnam-era "Agent Orange" pesticide that was linked to reproductive problems, non-Hodgkin lymphoma and Parkinson's disease. The EPA has, you guessed it, granted approval. Dow plans to make $1 billion from this nightmarish combo killer, and hopes to start selling it in the 2015 spring planting season.

Bottom line: Virtually every human, animal, and plant in America is now part of a massive, uncontrolled experiment to determine if an herbicide that's been widely used for less than two decades will cause serious health and environmental harm.

So avoid conventionally raised food as much as possible — especially anything containing corn or soy. Buy certified organic foods, as these do

not contain products with GMO ingredients. Or, better yet, grow your own food as much as possible, organically, using non hybrid seeds, and especially heirloom strains.

There is no better or more effective way to withdraw from the experiment.

The 15th-Century Venetian Nobleman's Secret to Living to 102

Modern Science is Rediscovering the 500-Year-Old Key to Growing Old Gracefully

Early 15th-century Europe was a hot mess.

The Black Death had wiped out a third of the population. Many of the remaining French and English, using a high-tech Chinese import called gunpowder, were blowing each other to bits in the Hundred Years' War. Joan of Arc epitomized the parlous times — inquisitors burned the 19-year-old "heretic" at the stake in 1431.

The Dark Ages were not quite over. The Renaissance, not quite begun.

But after this steady drizzle of anguish would come a sunny island of health and happiness... in the person of one Alvise "Luigi" Cornaro.

A Venetian nobleman, he died 450 years ago this month, in May 1566.

But he left behind a priceless legacy. His four books about living a long, robust life are a gift to the world.

For back when average life expectancy was roughly 35, Cornaro lived to an astounding 102. Just as remarkably, those years were full of vigor and happiness, culminating in a peaceful death as he napped in his chair. In the third volume of his *Discorsi Della Vita Sobria* (*Discourses on the Temperate Life)*, written at age 91, he pointed out that the physicians of his day marveled at:

how full I am of cheerfulness and health. They know, too, that all my senses are in perfect condition — as also are my memory, my heart, and my mind — and that this is equally true of even my voice and my teeth. Nor are they ignorant of the fact that I constantly write, and with my own hand, eight hours a day, and always on subjects profitable to the world; and, in addition to this, that I walk and sing for many other hours.

Centuries before modern medicine, this Italian *bon vivant* (a wealthy patron of the arts with no training in medicine) employed a simple method to live three times longer than his compatriots, and do so in vibrant

physical and mental health.

Cornaro's success was all the more unlikely because at age 35, ravaged by years of riotous living, physicians warned him that "in a few months," he would "certainly die."

Plagued by endless fever, debilitating stomach pain, gout, and "unquenchable thirst" (perhaps a manifestation of diabetes), a wise physician ultimately saved him with a single piece of advice. It's as relevant today as it was in 1499.

MODERATION IS KEY

Cornaro was told to abandon his life of overindulgence for one of strict moderation — *especially in the amount and type of food eaten each day.*

A wealthy patrician, as a young man, Cornaro had followed the gentry's custom and gorged himself daily. But seized by a burning desire to live, he followed his doctor's warning, reducing his total daily intake to 12 ounces of food and 14 ounces of wine, divided into four meals. As he put it:

I accustomed myself to the habit of never fully satisfying my appetite, either with eating or drinking — always leaving the table well able to take more. In this I acted according to the proverb: "Not to satiate one's self with food is the science of health."

Further, he began eating foods quite different from those of his wanton years. He discovered that his typical fare — well-aged wines, lots of fruit, salads of raw vegetables, and tarts and pastries all tended to inflame his symptoms.

Instead, he ate egg yolks, vegetable soup, and coarse bread. And though the vegetarian brigades these days claim him as their own, the Discourses make it clear he was fond of muscle, fat, and sinew: "Of flesh meat, I eat kid and mutton. I eat poultry of every kind; also of sea and river fish."

He drank light wine, less than a year old, and likely below the alcohol limit of 10 percent for modern Beaujolais. (Some modern health puritans have tried to portray his chosen beverage as "grape juice," but there's no evidence it was alcohol-free.)

Cornaro theorized that each person needed to experiment for himself to discover which foods, in which quantities, agreed with him or her.

But I would note that, in light of modern nutrition research, his dietary plan looks very much like a low-carb, moderate-protein, high-fat paleo regimen — the sort that benefits pretty much everyone who applies it.

In other words, it's close to the type of diet that has been found in clin-

ical trials to result in weight loss, Type 2 diabetes reversal, and improved cardiovascular health.

At 35, Cornaro made several other lifestyle changes, including taking care to get plenty of sleep — something he had neglected during his carousing years. He also engaged in daily, light exercise, especially walking and horseback riding.

He was completely cured within a year.

THE BEST PART ABOUT GETTING HEALTHY

After that redemptive year, Cornaro got on with his life. Indeed, his Discourses are inspiring precisely because he makes it clear that, in his view, long life as an end in itself is pointless.

Instead, establishing healthful habits allows one to forget about health and instead concentrate on art, service, family, conversation, and the various engaging activities that allow both the self and civilization to flower.

This is my favorite lesson from Cornaro's life. After developing the habit of eating simple, nutrient-dense meals and getting enough exercise and rest, he experienced the incalculable luxury of paying health no mind, and instead plunging into the rich worlds of art, beauty, friendship, service, and love.

BOTTOM LINE

This regimen seems to require iron discipline. To most Americans, one of Cornaro's typical meals would seem ridiculously paltry.

But you and I don't need to live an identically abstemious life.

Numerous animal trials have established that caloric restriction can indeed extend life and health.

It likely does this by *upregulating autophagy* — a fancy way of saying it accelerates the body's natural process of removing disease-causing cellular debris. But I'm not wholly convinced Cornaro really ate as little as he claimed. We have only his word for it, and his florid prose suggests he was capable of, shall we say, embellishment.

My guess is that he ate relatively small meals of nutrient-dense foods — whether he consumed 12 or 24 ounces daily is less important. I also doubt he drank only wine — he likely mixed it with water, a common practice at the time. So the point is to follow the spirit, rather than the letter, of Cornaro's advice by making sure to:

- Leave the table when still not "full"

- Prioritize nutrient-dense animal foods and fresh vegetables
- Get daily exercise…
- And plenty of sleep.

A variant of CR is intermittent fasting (IF), which allows larger meals, but requires periodically eating no food for 16–24 hours.

Are CR or IF for everyone? I don't recommend them for children, or women of childbearing age. But it's a complex question — with childhood obesity rampant, surely some measure of CR for some kids is in order.

The truth is that most of us would do well to adopt Cornaro's vita sobria, to whatever degree our discipline and circumstances allow. I don't weigh my food, but I do always "leave the table well able to take more" and believe this is a major reason that, like old Luigi, I am full of "cheerfulness and health."

EVERYDAY FOODS THAT CRUSH DISEASE

The Tasty Spice That Could Save Your Life

Protect Yourself From Alzheimer's, Arthritis and Even Cancer With This Tip

I'm a big fan of simple. So now I'll give you perhaps the simplest powerful health tip of all.

Eat turmeric.

Turmeric (Curcuma longa) is a spice that straddles cultures — it gives color and zing to Indian curries and makes American mustard yellow.

Beyond its vibrant yellow-orange hue and deep, complex flavor, evidence is mounting that turmeric is a potent disease-preventive agent as well — mostly due to its anti-inflammatory action.

Most Americans live their lives in a state of chronically heightened inflammation. Day in and day out, their immune systems are overexcited by diets heavy in processed carbs and oxidized vegetable oils (such as soybean oil in a deep-fat fryer). Chronic stress, sedentary lifestyles and lack of sleep also ramp up inflammation.

This slowly takes a toll on skin, arteries, and major organs, eventually leading to chronic disease.

Almost miraculously, turmeric has been found to help prevent or alleviate virtually the whole range of "diseases of civilization" including:

Alzheimer's disease: Studies indicate that extracts of turmeric contain

several natural compounds that block the formation of beta amyloid, the substance responsible for the plaques that slowly damage memory and cognition in Alzheimer's disease

Arthritis: Turmeric contains more than two dozen anti-inflammatory compounds. That includes six different COX-2 inhibitors (the COX-2 enzyme promotes pain, swelling, and inflammation; inhibitors selectively block that enzyme). Curcumin — the component in turmeric most often cited for its healthful effects — has also been shown to be effective against arthritis

Cancer: Curcumin and/or turmeric have been shown to be effective in animal studies to lower risk or help in treating cancers of the colon, mammaries, prostate, esophagus, and mouth.

THE SIMPLEST WAY TO ADD IT TO YOUR DIET

Anytime you make any soup, stew, or casserole, simply toss in a teaspoon of turmeric and a half-teaspoon of black pepper. The pepper is important because it contains a compound called piperine that helps the body assimilate healthful compounds in turmeric.

Do this until it becomes a habit. Soon, you'll join a billion Indians on the subcontinent who believe virtually no food tastes right without it!

Adding turmeric to your diet — today! — is one of the best moves toward optimal health you can make.

A Better Blood Pressure Remedy

Lower Your Hypertension The All-Natural Way

Conventional physicians fling a dizzying (in some cases literally) array of drugs at hypertension, commonly known as high blood pressure.

I'm talking diuretics, beta blockers, angiotensin-converting enzyme (ACE) inhibitors, calcium channel blockers, alpha blockers, nervous system inhibitors, vasodilators, and more.

In one sense, the docs are justified. Hypertension, defined as any reading above 140/90 mm Hg (millimeters of mercury) on the Velcro cuff, is indeed dangerous.

It sharply increases the risk of a variety of serious crimp-in-your-day problems, including heart attack, stroke, and kidney failure.

But it's also a condition that often yields to safe, natural therapies, ones that conventional physicians seldom recommend.

One of the best is, of all things, beet juice. In a recent study, 68 people with hypertension were randomly assigned to have either a daily drink of 250 ml of beet juice containing natural nitrate, which dilates blood vessels, or 250 ml of nitrate-free beet juice.

Result: The nitrate-containing beet juice dropped blood pressure by 8.1/3.8 mm Hg throughout the 28-day treatment period. Arterial stiffness eased as well.

If this significant reduction were helped along by other lifestyle changes that have been shown to drop blood pressure — like limiting caffeine and alcohol intake, maintaining optimal weight and getting daily moderate exercise of at least 30 minutes — the need for medications would likely vanish in many people.

Yet how often does the average physician recommend beet juice to the one in three Americans with hypertension? Since beet farmers don't send smoking-hot sales reps to the docs' offices, I'm guessing not often.

Bottom line: If you have hypertension, you must control it. If yours is only borderline high, there's no harm in purchasing a juicer and trying homemade beet juice, along with the lifestyle changes listed above, to help bring it into a healthful range.

Unlike conventional pharmaceuticals, beet juice has the extraordinary benefit of zero side effects, along with impressive nutrient density that can help support general health. It's a rich source of folate, potassium, vitamin C, antioxidants, and nitrates.

The Mineral You Need Most

It Supports Over 300 Bodily Processes — but Most Americans Are Deficient

In 1618, a farmer in Epsom — a tiny village 13 miles southwest of London — tried to get his cattle to drink from a freshly dug well.

They refused, apparently due to the water's bitterness. But, the legend goes, the farmer noticed that splashing this water on cuts and scratches (both his and the cattle's, presumably) led them to heal more quickly.

Ultimately, the bitter, dissolved substance in the water was identified as hydrated magnesium sulfate — later termed Epsom salt.

I've done a deep dive into the literature surrounding magnesium as a dietary essential and — as is too often the case — discovered enough to fill a book.

What follows is a seriously abbreviated collection of high points that I hope will persuade you to:

1. Evaluate your own magnesium intake.
2. Find natural ways to get more if you find you are deficient.

WHY IT IS ESSENTIAL

The trick with magnesium isn't showing why it's essential — it's finding a metabolic process it *doesn't* support.

Magnesium is involved in over 300 bodily processes. It does everything from helping mitochondria, the "powerhouses" of cells, to work properly; to keeping blood sugar stable; to promoting proper nerve and muscle function (including that big mass of nervous tissue between your ears known as your brain).

But despite its importance for good health, magnesium deficiency is common because it is easily "processed out" of modern, industrially formulated food. Lack of sleep, stress, and diabetes or prediabetes — three extremely common modern conditions — can all contribute to magnesium deficiency too.

Roughly 100 years ago, typical daily intake was estimated to be about 500 milligrams. But due to soil depletion and food processing, it's estimated that the average American today is getting roughly half that amount.

Deficiency signs include:

- Headache
- Fatigue
- Muscle cramps
- Unusual heartbeat patterns
- Numb or "tingling" extremities, especially the feet
- "Affect" changes, including depression.

HOW TO GET IT

As always, the best way to get any nutrient is through food. If you eat your recommended five–nine servings of vegetables daily — and at least two of those are dark, leafy green vegetables — you are making the right choice to support your body's need for magnesium. Nuts, seeds, fish, beans, lentils, and avocados are also good sources.

However, the amount of magnesium in any plant depends on how much it can take up from the soil, and many modern farms are magnesium

depleted. Supplementation, then, may be a good idea for virtually every modern American.

THE SCOOP ON SUPPLEMENTS

The daily value (DV) for magnesium is 400 mg for adults and children over age 4, but as is typical with daily values, this represents a minimum amount that prevents overt disease — not the optimal intake needed for robust health.

As I pointed out above, the average American is getting about 250 mg daily. I suggest starting to supplement with 200 mg daily, and note the effect that this has on your bowel habits. Keep adding 200 mg daily until your stools become slightly looser — that indicates your body has reached the saturation point and you are excreting the excess.

WHAT KIND IS BEST?

There are many kinds of magnesium supplements on the market. My two favorite types are magnesium glycinate and a new type, magnesium threonate, both of which have high absorbability. While I don't share the view of some health writers that magnesium stearate — a lubricant that helps in vitamin manufacture that happens to contain magnesium — is terribly dangerous, I don't think it's an optimal form of magnesium to take.

And as for when to take it, near bedtime is best, simply because magnesium has relaxation properties that can help with rest and sleep. Indeed, for many people, better sleep is the most rapid and obvious health effect they see from magnesium supplementation.

BOTTOM LINE

The widespread American magnesium deficiency is one more reason, as if one were needed, to make sure you are getting your leafy greens daily. Beyond that, if you suffer from one of the signs of deficiency listed above, there is little potential for harm and great possibility for benefit in adding at least 200 mg of magnesium to your daily supplement regimen.

This Vital Protein Is Your Key to Physical and Mental Health in 2016

From Younger Skin to Improved Joints, Add This to Your Diet and Reap the Rewards

Let's begin with a rather arresting mental image.

Suppose you observed two naked, bald people.

One is 25 years old. The other, 80 years old.

Could you tell them apart?

A silly question — the differences would be obvious. The 25-year-old would have firm, taut skin. The 80-year-old's skin would sag and wrinkle.

It gets interesting when you consider *why* these obvious visual differences (which suggest health differences) exist. Basically, you are looking at the story of collagen.

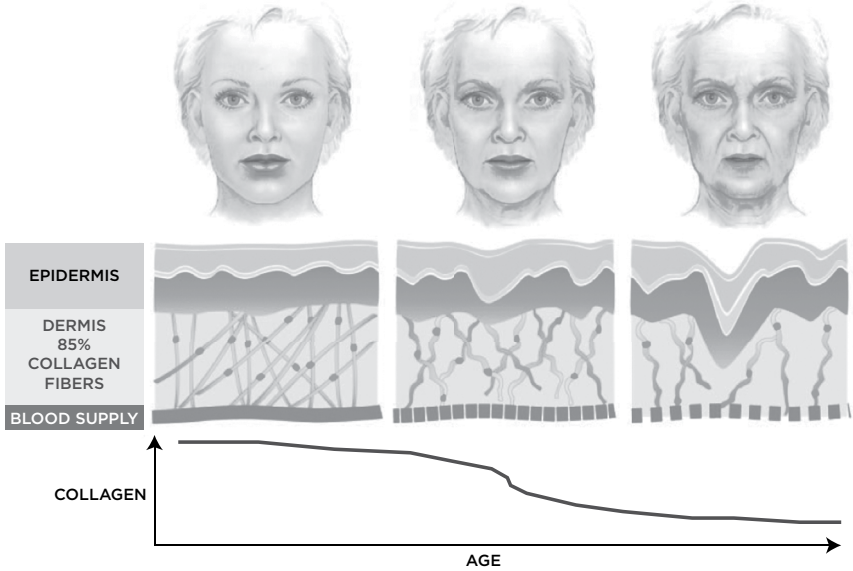
MORE THAN SKIN-DEEP

The word *collagen* stems from the Greek "kolla," which means glue. Gram for gram, some collagen fibers are stronger than steel.

So collagen is, essentially, the unique, sticky, fibrous protein that prevents the skin, joints, and internal organs from sagging.

It makes up about seven percent of the body's mass by weight and is concentrated in the parts that need the most structural integrity: skin, bones, cartilage, and fascia (the net-like tissue that surrounds muscles).

The body can make collagen, but it's a metabolically "expensive" process. So if you don't eat it, the amount your body produces will be the *minimum required to support life*, rather than the *optimum required for robust health and longevity.*



Source: EternoGen Aesthetics

Collagen production slows as we get older — hence the withered oldster referenced above.

The good news is that eating sufficient collagen supplies you with enough raw material to keep your collagen-intensive parts as strong and vital as possible as you age.

A variety of animal and human experiments and studies has confirmed that eating collagen sends more of the stuff to skin and joints, where it is needed.

THE WAY WE USED TO EAT

Up until a century or so ago, humans ate plenty of collagen. Like us, animals have lots of the fibrous, sticky material in their skin, joints, and tendons.

So back when our ancestors: 1) eagerly embraced animal-based foods and ate them at every meal and 2) ate the whole animal, for both frugal and health reasons, they got the benefits of a collagen-intensive diet: relatively firm skin, pain-free joints and strong bones well into old age.

Traditional cultures — many with healthy life spans longer than those typical in the U.S. — still revere collagen-rich foods such as soups made from oxtail, chicken feet, or fish/chicken/pig heads. The gelatin that forms atop such foods as they cool is rich in collagen, hence their reputation as nourishing, healing foods.

But these days, Big Food pushes cheap, high-profit carbs relentlessly. And people who still eat meat favor buttery tenderloins over the chewy, gristly bits.

Result: Modern American meals sorely lack dietary collagen.

WHY THIS MATTERS

Dietary collagen is vital in so many ways, it would take a book to enumerate them. But here are some highlights based on research. Benefits of consuming higher-than-normal levels of collagen include:

- **Skin:** Collagen supplements yielded "a statistically significantly higher skin elasticity level" in elderly women, according to a double-blind, placebo-controlled study of 69 women. This is the technical way of expressing "younger-looking skin"

- **Joints:** Another double-blind, placebo-controlled study of 30 people showed dramatic improvement in knee osteoarthritis pain

from taking supplemental collagen. More than a dozen studies show a similar effect

- **Muscle:** Men ages 63–74 taking part in a weightlifting program were divided into two groups. The study revealed that those taking collagen wound up with better muscular size, strength, and control than those who took a placebo.

- **Digestion:** Enjoy a drink now and then? An animal study suggests ingesting glycine (an amino acid abundant in collagen) protects the liver from the effects of alcohol.

I could list pages of proven advantages of collagen ingestion. Studies have shown improvements in sleep quality and even cellulite control.

Anything that pertains to bodily structure is likely to be helped by optimal collagen ingestion, so it makes sense that the advantages are numerous.

SO HOW DO I GET ENOUGH?

There are essentially two ways to boost collagen consumption:

1. **Eat collagen-rich foods.** The ancient practice of slow-simmering an animal's carcass — or, more directly, chowing down on its crunchy cartilage — is a great way to include the advantages of collagen in your life. However, many people these days are either too rushed to cook or too squeamish to munch directly upon animal anatomy. So the workaround is to…

2. **Take a collagen-rich supplement,** available from natural foods stores and online. Powdered collagen from beef, pork, or fish is available in two forms: traditional gelatin, which must be mixed with hot water and then cooled, or hydrolyzed collagen, which is nearly tasteless. It mixes easily with water or any other beverage or can be incorporated into recipes, including a fabulous snack I call Coconut-Collagen Bars

Generally, the first option is best if you have a reliable supply of organic meat and the time to cook it properly (which means slowly over low heat) — but that describes about 1 percent of the population these days. So do both. My wife, Laurie, and I eat collagen-rich broth in homemade soup and stew at least once a week — usually on weekends, when we're less rushed.

But we also take roughly 2 tablespoons of hydrolyzed collagen, dissolved in a cup of water, just before bed each night. The amino acid glycine in collagen has a profound quieting and calming effect on the nervous system. I find a nightly drink of hydrolyzed collagen adds at least an hour of quality sleep to my night.

One last note: The Japanese, who know a thing or two about healthy living, are huge fans of collagen. In just about any convenience store in that country, you have a choice of ready-to-drink bottles containing 10 grams of collagen dissolved in a fruit-flavored solution along with vitamins and minerals. If you've ever marveled at the relatively wrinkle-free skin of Japanese women as they age, consider that this is likely a major contributor.

Bottom line: I am hard-pressed to think of any dietary change with more potential to improve American health than the addition of more collagen to our daily diet. As legendary nutrition researcher Ray Peat puts it, "It's reasonable to consider using glycine/gelatin for almost any chronic problem."

I credit my daily ingestion to the fact that — even though severe osteoarthritis runs in my family — I am limber and pain-free at age 60.

In whatever way it seems most palatable to you, I urge you to give dietary collagen a try.

The Alzheimer's Miracle

Most people don't realize how widespread Alzheimer's and dementia really are. Statistics show that in the United States, someone develops Alzheimer's disease every 69 seconds.

According to the Alzheimer's Association's Disease Facts and Figures, this is expected to increase to a new case every 33 seconds by 2050.

Around 2050, it'll be so bad, that Alzheimer's will affect one in four Americans. This would make it more common than obesity and diabetes!

As you can imagine, most of that expected increase can be attributed to the aging baby boomer population. Even now, this disease is at epidemic proportions being that 5.4 million Americans are living with this disease.

According to a CNN report, a popular drug used to treat Alzheimer's patients in the early stages shows very little benefit — despite being approved by the FDA for moderate to severe cases. This is pretty alarming.

Fortunately Mother Nature provides solutions that are accessible to everyone to stave off this disease or even reverse it.

Going Hungry Could Save Your Life

Lower Your Risk of Cancer, Heart Disease, and Inflammation in 3 Simple Steps

Here's a word that I humbly suggest you add to your healthy-living vocabulary.

It's *autophagy*, pronounced aw-TAW-fug-ee.

Coined by Belgian biochemist and Nobel Prize winner Christian de Duve in 1963, it combines the Greek *auto*, signifying "self-," and *phagien* which means "to eat."

Understanding what it is, and how to optimize it, is absolutely vital to achieving and maintaining robust health.

Autophagy happens continually within all multi celled creatures. That includes you and me, a couple of 37 trillion cell arrangements popularly known as human beings.

As we create new cells by the millions hourly, we must also carry out autophagy — disposal of the dying and dead cells via "self-eating."

During this process, lysosomes — tiny sphere-shaped structures inside each cell — spew out about 40 kinds of enzymes to break apart decaying proteins and other big molecules into smaller, simpler ones that can be used to build new cells.

Lysosomes also help to destroy disease-causing bacteria and viruses.

As with any bodily process, autophagy can be vigorous, average, or seriously screwed up. This matters. The efficiency of your autophagous machinery is vastly important to your health.

Robust autophagy leads to long life. Indeed, while you'll hear millions of claims that this diet or that behavior can extend life, optimal autophagy is one of the few scientifically *confirmed* processes that can do this.

In animal studies, life spans have been extended up to 65%.

Ramped-up autophagy has also been shown in studies to lower risk of cancer, insulin resistance, infection, heart disease, neurodegenerative diseases (such as Parkinson's and Alzheimer's), and inflammation in general.

THREE SIMPLE STEPS TO OPTIMIZE AUTOPHAGY

1. **Get hungry now and then.** "One well-recognized way of inducing autophagy is by food restriction, which upregulates autophagy in many organs," concludes a 2010 study from the Scripps Research Institute in La Jolla, California. In other words, practice

intermittent fasting! Skip one meal a day, or one day of solid food per week. Perhaps the simplest tactic is to eat only within a six-hour "window" from noon to 6 p.m. Do what works in your life. "Hungrying up" on a regular basis matters more than the precise form and timing.

2. **Eat a high-fat, moderate-protein, low-carbohydrate diet.** There are tons of health-promoting effects of such a diet.

3. **Exercise.** We all know exercise can make us healthy, but why? Its ability to boost autophagy appears to be the major reason. During exercise, virtually every kind of tissue experiences a boost in lysosome activity.

Of these three, the first step is the most effective. Yet mainstream health advice often advises just the opposite. As a young man in the 1970s, I never heard anyone suggest eating "five or six small meals daily," but these days, it's close to nutritional dogma. An online search of the phrase "eat many small meals" returns over 275,000 results!

This is absolutely wrong, dangerous advice. When people are told to "eat many small meals," what they hear is "eat all the time," an activity at which most Americans excel.

It's no coincidence that obesity rates started ratcheting skyward in the 1980s, more or less in tandem with this widespread endorsement of more frequent meals. (The other major culprit was the government's nonsensical "low-fat, high-carb" dietary recommendation, which also leads to excessive hunger and chronic overeating).

In my overseas travels, I rarely see people chowing down in their cars, or in line for a movie, or otherwise outside the traditional time and space boundaries of a meal.

In the U.S., it seems that everyone continually eats everywhere.

The result: Many Americans spend a lifetime feeling sick and weak because daily overeating overwhelms their lysosomes and clogs their tissues with cellular debris that ultimately becomes toxic.

Now, I realize that disciplined eating is not easy. I like to chow down as much, perhaps more, than the next guy. But as a clean freak by nature, I've found it helps me to power through bouts of hunger by imagining leagues of industrious lysosomes busily power-washing accumulated junk out of my tissues.

Make hunger your friend. Regularly embracing even mild hunger can

ultimately bring not only physical health, but also mental focus and improved mood. It's worth the effort.

NANCY'S CURE

Alzheimer's knows no bounds, and celebrity means nothing to the disease. This became very clear when former President Ronald Reagan was diagnosed with Alzheimer's disease in 1993. He died just over a decade later, in 2004, by which time he was no longer able to do any of the outdoor activities he loved, had stopped eating and drinking, and could not recognize his children.

All through it, his wife, Nancy, stood by his side. If only she had known that there was a cheap, natural treatment for Alzheimer's that had the potential to reverse her husband's disease.

This traditional Indian medicine has been used for centuries and has recently been studied more extensively.

Turmeric, or more specifically the antioxidant **curcumin** found in turmeric, has been found to ease the oxidative stress and inflammation that play roles in Alzheimer's disease.

Studies in India, where turmeric consumption is part of the regular diet, suggest that country has one of the lowest rates of Alzheimer's in the world.

Adding turmeric to the diet of people suffering from Alzheimer's has been found to improve their symptoms and their ability to perform activities of daily living.

At its core, Alzheimer's is about inflammation. And this inflammation causes two types of lesions to form in the brain.

These two misfolded proteins are called plaques and tangles.

Plaques are a sticky group of proteins that act like a kink in a hose.

In a normal healthy brain, chemical signals travel back and forth between neurons on structures called synapses.

But when plaques form, they gob up neural circuitry and don't allow information to pass back and forth in the brain.

Tangles, on the other hand, work by collapsing the tiny tubes that feed the brain vital nutrients… essentially starving the brain and causing atrophy.

Together, these two mechanisms work together to clog up brain activity and starve the cells of vital nutrients, which causes brain damage.

This dual nature has made it difficult for scientists to develop an effec-

tive treatment plan. However, turmeric's anti-inflammatory, antioxidant, and anti-amyloid effects manage to attack the disease on both sides.

In one case study, after just 12 weeks of use, turmeric was able to relieve agitation, apathy, anxiety, and irritability. One 83-year-old female patient in the study was able to return to beloved hobbies like knitting. After a year of taking turmeric, she could recognize her family and recall her late husband.

Take a look at the acuity of her symptoms before and after treatment:

SYMPTOMS	BEFORE TREATMENT		AFTER TREATMENT	
	Acuity of symptoms	Burden of caregivers	Acuity of symptoms	Burden of caregivers
Delusions	0	—	0	—
Hallucinations	0	—	0	—
Agitation	2	3	0	—
Depression	0	—	0	—
Anxiety	2	1	0	—
Euphoria	0	—	0	—
Apathy	3	1	0	—
Disinhibition	0	—	0	—
Irritability	2	2	0	1
Aberrant motor activity	0	—	0	—
Nocturnal aberrant activity	0	—	0	—
Prandial aberrant activity	0	—	0	—
Total Score	9	7	0	1

Acuity of symptoms on a 4-point scale: 0, none; 1, Mild; 2, Moderate; 3, severe; Burden of caregivers on a 6-point scale, Not at all distressing; 1, minimally distressing; 2, Mildly distressing; 3, Moderately distressing; 4, Severely distressing; 5, extremely distressing.

Source: An International Quarterly Journal of Research in Ayurveda

Now, this patient and the others involved in the case study were given 764 mg turmeric per day, which worked out to be 100 mg of curcumin a day. That might seem like a large number, but it's only about half a teaspoon! That's easy to incorporate into recipes in your daily life. Turmeric is cheap and is easy to incorporate into your daily diet. Doing so could help stave off Alzheimer's disease and improve the lives of your loved ones who are suffering from it.

As a bonus, combine curcumin with black pepper. A compound in black pepper called piperine helps to increase the bioavailability of turmeric.

In other words, black pepper allows more of turmeric's beneficial effects to make it into the bloodstream. It delays the body in metabolizing,

or getting rid of, the turmeric. Even just a tiny pinch of pepper, or 1/20th of a teaspoon, can boost the bioavailability by 2,000%!

One easy way to get both turmeric and pepper? Curry! The Indian staple often combines both.

If curry isn't to your liking, try sprinkling turmeric, salt, pepper, and olive oil on your favorite vegetables and roasting them in the oven.

THE YELLOW HERB THAT CAN PROTECT YOUR MEMORIES

Alzheimer's is a serious medical condition that many people in the U.S. suffer from. As your body slows down and ages, your brain continues to develop at a faster pace. Eventually, the brain disconnects from the body. Memory loss makes it near impossible for a person to function as they did previously.

A substance known as berberine could help mitigate some of these terrible symptoms, by providing you with lucid moments. **Berberine** is packed with a component called isoquinoline alkaloid, and it helps slow down the aging process. Isoquinoline alkaloid is made up of two antioxidants: acetylchalinesterase and butyrylcholinestaerase. They've been shown to help prevent damage to biomolecules in your body. This helps preserve memory function and lower lipids, helping with blood flow in the brain.

Adding berberine to the diet of someone suffering from Alzheimer's may help them experience more moments of lucidity.

YOUR BODY'S NATURAL ALZHEIMER'S DEFENSE

Creatine is a slow-digesting protein that's been isolated and sold in over-the-counter powders for years. Originally, it was made for people looking to increase mass and bulk up. Now there's evidence showing the substance could help provide you with a memory boost.

It does more than just relieve the pain and soreness in your body. The protein also assists with cognitive function. The components in the substance work together to help the brain improve its short-term and long-term memory, especially if your body is deficient in creatine. It's still a staple for many fitness fanatics. Not only does it help improve memory function, it also helps the body grow and recover from strenuous exercise.

As an added bonus, creatine fights muscle loss, increases strength, energy, and vitality.

Animal Food for Brain Health

Turbocharge Your Mind's Performance with these Essential Nutrients

On occasion — for example, when it's time to recall your anniversary, the boss's husband's name, or your Netflix password (which is your pet's name, but *which freaking pet*?) — it may seem that your brain serves little purpose other than to keep your skull from collapsing.

But brains work hard, even when they don't seem to work especially well. Though comprising just two percent of your body weight, they relentlessly incinerate 20 percent of your calories.

And though some have used their brains to devise arguments for the moral superiority of vegetarianism, the fact is your hungry gray matter has evolved to run optimally on foods that travel by hoof, wing or the fin.

The following nutrients are essential for your brain's maximum performance, so make sure you are getting them. The best way is via the food sources listed, but all are also available in supplement form. If you take that route, purchase only from a reputable source, and follow dose instructions on the label:

Carnosine: "Carno" is built right into the name because this nutrient is naturally found only in animals, concentrated in their muscle and brain tissue. This combination of two amino acids inhibits diabetic complications in mice, is showing promise against neurodegenerative disorders, and delivers powerful antioxidant protection. In other words, it appears to generally slow the effects of aging. Patients with brain disorders like Alzheimer's and Parkinson's have been found to be deficient in carnosine. The best natural sources are beef, poultry, and pork products, and, to a lesser extent, milk, fish, and eggs.

B12: Vitamin B12 deficiency is linked to impaired memory, mental disorders, dementia, and Alzheimer's disease. This nutrient is found primarily in animal foods, with the highest concentrations in shellfish, liver, and fish. Meat, cheese, and eggs also provide generous amounts. Though B12 supplements are inexpensive and readily available, 92 percent of vegans and 47 percent of lacto-ovo vegetarians in a study were deficient.

Docosahexaenoic Acid (DHA): Omega-3 fatty acids are essential for normal brain function. DHA is the most abundant fatty acid in the brain, and deficiency can adversely affect our ability to think and remember. The best natural sources are fatty fish and grass-fed animals.

Creatine: This essential nutrient supports energy, muscle tissue, and

cognitive function. Red meat, salmon, and tuna are primary natural sources. Vegetarians are often deficient; research shows significant improvement in mental and athletic performance after creatine supplementation.

Vitamin D3: Vitamin D supplementation is all the rage now, and for good reason. Low levels are associated with multiple sclerosis, depression, and cognitive impairment, as well as cardiovascular disease and cancer. We moderns tend to get very little natural sunlight, protected as we are by sunblock, clothes, cars, and buildings. But when we're exposed to ultraviolet light, cholesterol in our skin naturally converts to vitamin D. If we can't get enough sun (at least 30 minutes daily on bare arms and face between 10 a.m. and 3 p.m.) we must rely on other sources. Of the two types of D found in food — D2 in plants and D3 in animals — D3 is the more effective. The best animal source is cod liver oil, but other supplements are cheap and effective without the "challenging" flavor.

In short, there's no escaping the fact that we, along with our brains, co-evolved with the unique nutrients that only animal-based foods can provide. If brain fog is part of your cognitive life, add these nutrients to your diet in whatever form you regard as most palatable. Your brain will thank you.

THE JELLY THAT PROMOTES BRAIN TISSUE

Royal jelly is one of the most potent and complex foods you might find on the planet. The food helps with nutrient deficiencies and may also have some cognitive improvement qualities. The creamy substance is the main food source for the queen bee in a bee colony. It's naturally created by worker bees. After a queen consumes it, she can experience a 40% growth increase. Additionally, queen bees live up to 40 times longer than their worker counterparts.

The secret behind royal jelly is the acetylcholine found within it. Increasing acetylcholine in the brain protects it from the potentially detrimental effects of Alzheimer's. Consuming royal jelly could also prevent the degenerative properties of the disease from getting worse.

STARBUCKS' MEMORY HEALTH SECRET

If you're like most people, you have a cup of **coffee** first thing in the morning. It helps you wake up and gets you ready for the day. But did you know that cup of coffee could also be helping maintain healthy brain functions?

Studies have shown one or two cups of coffee a day help improve your

brain's ability to store long-term memories. Caffeine in coffee (as well as tea) helps stimulate the parts of the brain that control memory functions.

Don't stop at just boosting your memory. Add some cinnamon to your morning cup of coffee to help stabilize blood sugar for the rest of the day. This combination also reduces inflammation in the body and protects against multiple forms of cancer.

Dr. Perlmutter's Guide to Brain-Building Probiotic and Prebiotic Foods

Reap the Benefits of a Healthy Gut by Incorporating These Into Your Diet

PROBIOTIC FOODS

Active-Culture Yogurt

Seek out yogurt from grass-fed or pasture-raised cows. For people sensitive to dairy, coconut yogurt is an excellent dairy-free way to work plenty of enzymes and probiotics into your diet.

Kefir

The name *kefir* is derived from the Turkish word keyif, which means "feeling good" after consumption. This fermented dairy product is very similar to yogurt.

Kombucha Tea

This is a form of fermented black or green tea that has been used for centuries.

Tempeh

Many people, especially vegetarians, eat tempeh as a substitute for meat. Tempeh is fermented soybeans and a complete protein, with all of the amino acids.

Kimchee

A traditional Korean dish, this is a mixture of fermented vegetables and seasonings.

Sauerkraut

Not only does this fermented cabbage fuel healthy gut bacteria, but it contains choline, a chemical needed for the proper transmission of nerve impulses in the brain and throughout the central nervous system.

Pickles

For many, pickles can be your gateway food to more exotic fermented foods.

Pickled Fruits and Vegetables

Pickling fruits and veggies, such as carrot sticks, transforms the usual into the extraordinary. Whether you do this yourself or buy pickled produce, keep in mind that the probiotic benefits are only present in unpasteurized foods pickled in brine, not vinegar.

Cultured Condiments

Believe it or not, you can create lacto-fermented mayonnaise, mustard, horseradish, hot sauce, relish, salsa, guacamole, salad dressing, and fruit chutney. A simple Google search will turn up plenty of recipes.

Fermented Meat, Fish, and Eggs

Consumed in many traditional fares, you can find some mouthwatering recipes, from corned beef to pickled sardines and fermented hard-boiled eggs.

PREBIOTIC FOODS

Acacia Gum (or Gum Arabic)

To reap the benefits of acacia gum, you can buy acacia powder and mix it with water.

Raw Chicory Root

I use chicory root when cooking, as it is an excellent source of antioxidants, as well as a terrific system cleanser.

Raw Jerusalem Artichoke

Jerusalem artichoke, which you might know better as sunroot, is actually

a species of sunflower loaded with nutrients and health benefits.

Raw Dandelion Greens

Dandelion greens are a rich source of prebiotics.

Raw Garlic

There are myriad health benefits to be derived from garlic, and the fact that raw garlic is packed with prebiotics is just one of them.

Raw or Cooked Onion

In both raw and cooked form, onions carry a strong prebiotic load.

Raw Leek

Leeks are a subtle way to add not just flavor but nutrition to any meal you are making.

Raw Asparagus

One of my favorite snack foods, or side dishes, is fermented spiced asparagus.

Adapted from Brain Maker Foods.

The All-Natural Ancient Indian Secret to a Better Brain

Improve Your Thinking, Memory, and Mood with These Four Traditional Ayurvedic Herbs

First transmitted through oral traditions and later through writings, Ayurveda, the ancient medical system of India, dates back to at least 5,000 BCE.

Though conventional medical wisdom assumes that all ancient medicine is just nonsense and superstition, science is showing that many of the traditional herbs used in Ayurveda do have health benefits.

Let's see what the human studies have to say about some of these herbs — all of which have been shown to improve brain health, including improvements in thinking, memory, and mood.

TURMERIC

Everyone and their vegan mother loves turmeric and knows how good it's supposed to be for you. They may not be able to tell you what it actually does, but they know it's good.

Practitioners of Ayurveda, though, have known for thousands of years that it's anti-inflammatory enough to sometimes replace pain meds. It can reduce depression symptoms, even in patients with major clinical depression. It shows neuroprotective efficacy against animal models of Alzheimer's disease, epilepsy, and other major neurological disorders. And it's delicious. Pair with black pepper to make it even more effective.

ASHWAGANDHA

The grandfather of Ayurvedic herbs, ashwagandha promotes a healthy response to stress, which is a major problem in the modern world. The big problem with stress, though, isn't so much the thing causing it but how we respond to it.

You can try reframing stress in your mind or learning to be less judgmental and reactionary and more present. You can also take ashwagandha.

Ashwagandha is an adaptogen, meaning it promotes a healthy stress response. Stress happens and you can't avoid it. Ayurveda acknowledges this and offers ashwagandha as an ally to handle it. Whether it's the negative impact on fertility and sex hormone production, the response to resistance training, or the spike in cortisol and anxiety, ashwagandha helps reduce the negative effects of stress on our health and happiness. It basically makes oxidative stress less bad.

BACOPA MONNIERI

Bacopa monnieri enjoys attention from the techie crowd for its beneficial and considerable effects on memory, but they weren't the first to discover its nootropic qualities.

For thousands of years, Ayurvedic healers have been prescribing it for improved mental health and cognition. Whether you're a senior citizen suffering from memory impairment or an older person who's otherwise healthy, *Bacopa monnieri* can increase your focus and working memory.

HOLY BASIL

Make pesto from this and someone's liable to get lucky, at least according to traditional Ayurvedic herbalists who use holy basil as a powerful aphrodisiac.

In rabbits, holy basil is a potent testosterone booster (while decreasing sperm count). In humans, the sexual effects haven't been tested or confirmed. But what have been confirmed are the boosts to immune function, blood glucose control, and reductions in anxiety and depressive symptoms.

That said, a friend of mine swears by holy basil for testosterone and libido boosting.

Immune Boosters

When penicillin was first discovered in 1928 by Alexander Fleming, it was a game-changer in how we treat infections. But for years now, rampant, overuse of antibiotics has met the law of diminishing returns. Reuters reports:

> *"The more antibiotics are prescribed for coughs and flu-like illnesses, or urine infections, the more bacteria become resistant in a vicious cycle, said British researchers who analyzed 24 previous studies of antibiotic resistance."*

> *"The effect is greatest in the month immediately after treatment, but may last for up to a year, and this residual effect may be a driver for high levels of resistance in the community."*

Fortunately, more doctors are starting to limit antibiotic prescriptions.

Even still, antibiotic resistant infections now claim more lives each year than AIDS.

In a study published in the *Journal of the American Medical Association*, there were nearly 100,000 cases of invasive MRSA infections in the United States in 2005, which led to more than 18,600 deaths.

That's more than the population of Dover, New Jersey. An entire town wiped out.

When you include all resistant infections, nearly 1.7 million Americans contracted infections during hospital stays in 2007 and 100,000 people died from these diseases according to the U.S. Center of Disease Control.

This problem is costing the American health care system more than $1.87 billion a year to treat drug-resistant bacteria.

This doesn't sit well with me. There's a problem here. The so-called authorities fumbled the ball again. We want to give you options.

25 QUICK TIPS

Here's a quick shortcut. Write down these 25 superfoods you can always

turn to if you want to help boost your immune system. You can find them in your local grocery store, and they won't burn a hole through your wallet once you see the final bill. They are:

- Apples
- Berries
- Broccoli
- Carrots
- Citrus Fruits
- Dark Leafy Greens
- Green Food Powders
- Figs
- Dates
- Garlic
- Flaxseed
- Legumes
- Oats
- Olives
- Herbs
- Spices
- Mushrooms
- Potatoes
- Sea Vegetables
- Squash
- Tomatoes
- Soy Foods
- Nuts and Seeds
- Whole Grains
- Yogurt

CAMPFIRE IMMUNE BOOSTERS

Boosting your immune system is the best way to prepare and strengthen your body against common ailments like the cold and flu virus. It helps increase white blood cells in the body preparing them to fight off any foreign intruders or diseases. If you imagine your body as a battlefield, boosting your immune system would be like fortifying your base defenses. And the best way to boost these defenses is by eating foods that promote and strengthen the body.

Foods like **onions**, **leeks**, and **beans**.

Onions and leeks contain flavonoid antioxidants that aid in fighting infections and bacteria by cutting down inflammation. These foods contain powerful substances like quercetin, allicin, and anthocyanins.

Beans, on the other hand, help combat cold and flu viruses. You could think of them as another "super food" due to their overall nutritional balance. Beans aid in white blood cell production, and prepares your body to be more aggressive when faced with these foreign infections.

You might think getting your annual flu shot is all you have to do to keep yourself safe during flu season. But one recent study might make you think otherwise. It showed that if you vaccinate every single health care worker in a hospital, it doesn't decrease the number of flu cases at all. Why? Because unless you're one of high risk groups (children, elderly, those with respiratory problems), getting a flu shot has very little effect on whether you get sick. Just something to think about.

THE $9.99 COLD AND FLU KILLER

Beta glucans are a "crucial weapon" when fighting off infections and staying healthy. These nutrients come from outside bacteria sources such as yeast, grains, and shiitake mushrooms, so getting them into your system shouldn't be a problem.

This substance acts as an immunomodulator agent once you digest it. Basically, it helps promote and strengthen the immune system, getting it ready for any potential threats. They also stimulate the activity of macrophages. These are aggressive immune cells that attack pathogens that enter the body. The more beta glucans you have in your system, the more of these aggressive cells you'll have to protect you.

Beta glucans combined with antibiotics can also aid in the production of white blood cells and can beat aggressive flu viruses and diseases.

Want to know what doctors do to keep themselves healthy and protected when cold season comes around? You'd be surprised at the simple steps they take.

1. Wash your hands
2. Keep all frequently used areas clean
3. Exercise to keep your immunity up
4. Take advantage of herbal medicines

THE GREAT WHITE SHARK IMMUNE INTENSIFIER

Shark liver oil aids in treating cancer and other diseases due to its immune boosting properties. Consuming the substance will provide you with a rich source of alkylgylcerols, a chemical that may have anticancer properties. Additionally, it will provide you with other powerful nutrients that can combat other diseases.

Recent studies also show that shark liver oil could inhibit the growth of tumors in blood vessels. The oil lined the walls of these blood vessels, preventing excess tumor forming proteins from forming. Certain studies have also shown that when used in combination with chemotherapy, patients had a better chance of seeing tumors shrink or disappear completely.

THE COLD AND FLU CURE FOUND IN THE PRODUCE DEPARTMENT

People have been enhancing their food with spices throughout history. You might be surprised, however, to find out many of these spices have positive health benefits. In fact, there's one spice used in countless dishes all over the world that could help boost your immune system and protect you against some forms of cancer.

Garlic: In a way, it's an elixir in herbal medicine. The cloves help fight against the common cold and keep other infectious diseases at bay. A single clove of garlic has 5 mg of calcium, 100 sulfuric compounds and 12 mg of potassium. Combined, these ingredients are a powerful natural remedy and can clear out bacteria and infections from the body. Raw garlic was even used to help prevent gangrene in both World Wars, showing just how powerful it is as an ingredient.

Garlic is just one spice you can take to slow down the aging process and add years to your life. Think about incorporating the following spices into your diet to keep your body young and active: turmeric, basil, thyme, cloves, oregano, sage, rosemary, ginger, cinnamon, chili pepper, cayenne, and capsaicin.

HOW HONEY CAN PROTECT YOU FROM THE FLU

Manuka honey isn't like the regular honey you buy in the grocery store. The honey is created by bees in New Zealand who feed off the nectar of the manuka tree. The honey contains a substance called methylgloxal, a compound that assists with antibacterial activity.

When you eat this honey, your body produces something called cytokines. This substance helps the body organize and prepare the immune system, improving your body's natural response. The honey also assists with healing chronic wounds. Recent studies have shown it kills about 85% of bacteria that develops a biofilm. Biofilm is a substance that allows bacteria and other microorganisms to stick together, making chronic wounds more prevalent.

Consuming this honey will also boost the immune system, getting it ready to deal with any pathogens that enter the body. A tablespoon a day can help the body significantly, especially when mixed with cinnamon and water.

THE EMPHYSEMA FLU-BUSTER

Amino acids and antioxidants are essential in the daily bodily functions. **N'acetylcystein (NAC)** is a super substance that can help protect you against colds and flus. Studies have shown that amino acids and antioxidants reduce and loosen mucus of people who suffer from chronic bronchitis. NAC can help naturally break down the buildup of fluid in your body and relieve congestion.

Additionally, NAC protects the liver from damage caused by acetaminophen by creating a protective lining around it. It also increases your resistance against particular nasty strands of flu (such as the H1N1 virus, commonly known as "swine flu") and boosts your overall immune system. It promotes the production of glutathione, another powerful and important antioxidant in the body.

What happens if you come down with the flu, you take your temperature, and you discover you're running a high fever? If it's over 104 degrees, you should go see a doctor. But for anything below that, the best thing you could do is… nothing. Fevers usually run their course in a day or two.

BOOST YOUR IMMUNE SYSTEM WITH THIS LITTLE KNOWN BERRY

Elderberry is a handy option for people with autoimmune disorder or people who have weak immune systems and are susceptible to colds and flus. When you consume elderberry, the substance assists the body with the production of cytokinesis. Cytokines are proteins that help regulate and stabilize various systems in the body and help your immune system fend off diseases and infections.

When administered in effective dosages or with the drug, Sambucol, elderberries create a powerful autoimmune response that has improved the lives and health of AIDS and cancer patients. It's best to use over the counter pills or syrup when ingesting the substance.

Studies are still ongoing and clinical trials are in order. Regardless, current tests show it's an effective immune booster.

Check out these other food options to help strengthen your metabolism and aid in digestive recovery: yogurt, kefir, kombucha tea, kimchi, and sauerkraut.

DON'T OVERLOAD ON FIBER

High levels of fiber in your diet help regulate bowel flow and improve your intestinal health. The better your bowel movements, the healthier you are, in general. Now there are even claims of weight loss benefits associated with it. However, care should be made not to ingest too much of the substance.

One reason why fiber is so popular for people trying to lose weight is because it makes you feel more full. Fiber fills you up and prevents you from overeating. If you consume more than a normal amount, you could cause health problems like cramping. This occurs when the body can't properly break down and synthesize foods. Just like the old saying goes, too much of anything is bad for you. And that certainly applies to fiber. In fact, significantly high levels of fiber in your system may stop the digestive process completely.

THE DIGESTION MIRACLE

A few months ago, while visiting the *Natural Health Response* headquarters in Baltimore, I had a chat with their resident "Underground Health Researcher," Nate Rifkin. He was puzzled because while he was making healthy changes in his diet, he began experiencing pain in his gut after eating a meal.

After listening for a bit, I paused, gave him what I figured was my best steely-eyed gaze, and said, "Eat dirt."

Well, OK, perhaps I wasn't so blunt. In reality, I explained to him a surprising nutritional habit of our ancestors:

"Thousands of years ago, humans ate food picked straight from the ground, which was often covered with dirt and other so-called 'contaminants.' However, these were actually healthy." How so?

Because the microbes in dirt, as well as "spoiled food" can improve the

health of your gut and digestion. In fact, they assist in digestion as part of a symbiotic relationship with your body. Your stomach and intestines work in concert with these little "helpers" to break down food.

Where things go wrong, however, is when we eat a diet that doesn't sustain this friendly bacteria. Processed foods, and especially manufactured substances like diet soda, have been shown to alter your gut bacteria for the worse.

Going through a round of antibiotics is the gut bacteria equivalent of the nuclear option. It has potential to kill virtually everything.

This is especially alarming because when good bacteria in your gut die out, this leaves more room for bad bacteria to proliferate.

Ironically, overuse of sanitation and modern medical "miracles," including powerful antibiotics, is ruining our digestion. However, you can turn things around.

Just in case you're still reeling from the mere thought of eating food with bits of dirt on it, fear not. You have more palatable options. Near the top of the list is a drink called kombucha.

Called "divine che" from its origin country of China, this drink was prized as far back as 220 B.C., during the Tsin Dynasty, for its detoxifying and energizing properties (Roche, 1998).

If someone handed you a glass today, you might think you're drinking a rich, fizzy soda with an oddly sour aftertaste. But the truth is, kombucha gets is carbonation from the growth of healthy bacteria within.

It's made by fermenting tea and sugar with a SCOBY. This stands for symbiotic colony of bacteria and yeast.

If you're concerned about it harboring bad bacteria, be comforted to know that the SCOBY produces acetic acid and ethanol, which have antimicrobial activity, protecting against pathogenic bacteria that could contaminate the kombucha.

(There have been cases of harmful bacteria proliferating in homemade kombucha if it's not properly prepared, so if you're hesitant, start with a commercial brand. More on this distinction in a moment.)

First, let's cover the science behind this product, because there are plenty of slimy foods permeating the market with rich histories of traditional use… but that doesn't necessarily make them useful.

It appears kombucha, however, is. One study showed it improved the liver and kidney functioning in diabetic rats. Another showed similar results with rats fed cholesterol. (And of course, I must note that while feed-

ing rats cholesterol is, indeed, bad for them, humans tend to do just fine.) These positive results might relate to the drink's antioxidant properties, which are higher than black tea.

Another mouse study out of India showed kombucha may have the power to help heal ulcers as well as the prescription drug Prilosec.

No wonder it only made $358,800,000 for Big Pharma in 2013! (The drug, that is.)

And those Pharma apparatchiks must have used a hefty chunk of those profits for Wikipedia donations. Because according to the online cesspool's page on kombucha:

"In a systematic review of 2003, Edzard Ernst characterized kombucha as an 'extreme example' of an unconventional remedy because of the great disparity between implausible, wide-ranging health claims lacking evidentiary support, and the potential for harm the preparations seem to hold. Ernst concluded that the unsubstantiated list of proposed therapeutic benefits do not outweigh the known risks."

Of course, their source for this conclusion is a study done about a decade before the ones mentioned previously. I'm not holding my breath for an update from them. But just in case any Wiki reps are reading this, here's some more evidence of kombucha's effectiveness:

Some commercial brands use specific strains of probiotics in their product. GT's kombucha uses Bacillus coagulans GBI-30 6086. This strain has been the subject of multiple human clinical studies and has been shown to reduce gas, bloating, and abdominal pain in subjects with irritable bowel syndrome. It may also help protect against C. difficile infection and boost the immune system.

Most commercial kombuchas also contain Saccharomyces boulardii, a beneficial yeast that can also help protect against C. diff infections and antibiotic-associated diarrhea and improve symptoms of digestive disorders like Crohn's disease and ulcerative colitis.

This was more than enough information for our intrepid Underground Health Researcher to try drinking kombucha for his gut pain.

And the result? Nate felt much better. To this day, he makes sure to drink kombucha, and is even adding other fermented foods to his diet, including sauerkraut. His gut will thank him.

Other sources of probiotics include:

1. Kefir, a fermented milk drink.
2. Kimchi, a Korean dish made of fermented vegetables.

3. Yogurt with active cultures, which you can find in most supermarkets.
4. Sauerkraut
5. Miso

Try one of these for yourself and your gut will thank you too.

Kombucha can be found at many health food stores and even some major supermarkets. But if you're the do-it-yourself type, you can take a crack at making it at home. I do have to give you a serious warning: If you make a mistake in the process, there is the potential to grow harmful bacteria. I can't cover every aspect of creating your own preparation in this guide, but I do have a resource for you:

Check out **kombuchakamp.com** for instructions, more info, and supplies.

SAVE MONEY (AND EAT BETTER) WITH THESE SUPERMARKET TRICKS

Your GMO-Free Shopping Guide

You are on your way. Making changes — especially cutting back on carbohydrates and boosting consumption of safe, healthy saturated fats — will automatically result in a big drop in your GMO intake.

However… life is complicated. It can be exceptionally difficult to avoid all of the foods you once ate, and frankly, e*verything is OK in moderation, even carbs.*

So let's lay out four general rules for eating GMO-free:

1. Buy organic foods or grow your own. The USDA and other organic-certification organizations will not approve products with GMO ingredients. In your own garden, use only certified organic and/or heirloom-variety seeds.

2. Look for the "Non-GMO Project Verified" seal. The Institute for Responsible Technology is a leading worldwide organization in the effort to inform governments, industry, and the public about the dangers of GMO foods. The group's seal means the organization has determined that the product is free of genetically modified organisms.

3. Don't buy corn, soy, canola, or cottonseed, or the oils and other products derived from them, as these are the foods most likely

to be GM. The only possible exception is corn on the cob from a farmer's market or your own garden. Be aware that deep-fried foods offer a double-whammy to your health — highly oxidized seed oil from the fryer is a cardiovascular risk on its own; the fact that the oil is almost certainly from GM soy just compounds the risk.

4. Steer clear of packaged and processed foods. By one estimate, GM ingredients are in about 80% of packaged foods in the U.S. and Canada.

For extra credit…

5. Move to Vermont. Obviously, this is a tough one unless you happen to be unusually mobile — or have other reasons for taking up residence in the Green Mountain State! But Vermont has the distinction of enacting the nation's first GMO labeling law, slated to take effect July 1, 2016. At the very least, this enlightened policy is one more reason to make vacation plans that include this small oasis of food-safety sanity.

Now let's get specific. Category by category, brand name by brand name, which foods can you be sure are GMO-free?

Let's start with some of the most healthful types of foods.

MEAT, FISH, AND EGGS

- 365
- Abbotsford Farms
- Alexandre Kids
- American Homestead Natural Pork
- Amore
- Ayrshire Farm
- azumagourmet
- Backyard Birds
- Backyard Eggs
- Be Green Packaging
- Blue Sky
- BN Ranch
- Brunnquell Farms
- Burroughs Family Farms

- Cold Spring Ranch
- Coleman Natural
- Coleman Organic
- Crown Prince Natural
- Crystal Lake Farms
- Diestel Turkey Ranch
- Draper Valley Farms
- Draper Valley Farms Organic
- Egg Innovations
- Fairfield Specialty Eggs
- Farm Stand Eatery (Restaurant)
- Firstlight Grassfed
- Furry Foodie
- Giving Nature
- Grayson's Premium Pork
- Harvestland
- Harvestland Organic
- Herbruck's
- Hickory Nut Gap Meats
- Homegrown Meats
- Hudson Valley Duck Farm
- Ian's
- John's Farm
- JoKeKa Farms
- Keller Crafted Meats
- Koch's Turkey
- Leblanco
- Mary's Chicken
- Mary's Duck
- Mary's Geese
- Mary's Heritage Turkey
- Mary's Organic Chicken
- Mary's Organic Turkey
- Mary's Pasture Raised Chicken
- Mary's Prepared
- Specialties
- Mary's Turkey
- McDowell Farms

- Metabolic Response Modifiers (MRM)
- Mindful Meats
- Murray's Chickens
- Natural Sea
- Nature Fed
- Nellie's Cage Free
- Neptuna
- NestFresh
- Northwest Farms
- Northwest Farms Organic
- Ocean Naturals
- Organic Prairie/CROPP
- Cooperative
- Organic Valley/CROPP Cooperative
- Premium Beef and Grain
- Pure Country Pork
- Ranger
- Rocky Jr
- Rocky the Range
- Rosie Organic
- RR 1 Farms LLC.
- Skagit Red
- Smart Chick Farms
- Smart Chicken
- Sonoma Red Organic
- Starfish
- Stiebrs Farms Go-Organic Eggs
- Stiebrs Farms Natural Choice Cage Free Eggs
- Sustainable Seas
- Terembry Farm
- Tonnino
- Tree of Life
- Wild Planet Foods

FRUITS AND VEGETABLES:

- 13 Foods
- 365
- Activz

- Alexia
- Allgood Provisions
- AMCO Select One
- Amphora
- Andros
- Angel Red
- Appalachian Naturals
- azumagourmet
- Backyard Farms
- Bare Snacks
- Barton Creek Crossing
- Be Green Packaging
- Biad Chili Products
- Bistro Fresh
- Blossom Hill
- Bonne Maman
- Brooks Tropicals
- Bucks County Fresh
- Bybee NGS
- Cadia
- Cahoon Farms
- Cal-Organic Farms
- Camposol
- Cape Cod Select
- Carmelina 'e…San Marzano
- Cascadian Farm
- Cedar's Mediterranean Foods Inc.
- Central Market Organics
- CherryMan
- Chris Family
- CIRIO
- Cocomi
- CRF Frozen Foods
- Crispy Green
- CRO
- Cuties
- Daily Pantry
- Dassi Family Farm

- Decas Cranberry Products Inc.
- Dei Fratelli Truly
- Divemex
- Divina
- Double Diamond Farms
- Doylestown Fresh
- Early California
- Earth's Best
- Eden
- EFoods
- Ela Family Farms
- Emerald Cove
- Emperor's Kitchen
- Enjoy Life Foods
- Epicure Selections
- Essential Living Foods Inc.
- Exotic Superfoods
- FanciFood
- Farm Stand Eatery (Restaurant)
- Farmer's Market
- Field Day
- Fiordifrutta
- FirstFruits
- Flora
- Florida Urban Organics
- Fowler
- FOXY
- Fresh on Demand
- Fruit Bliss
- Fruit d'Or
- FRUTTO D'ITALIA
- Funky Monkey Snacks
- GoGo SqueeZ
- Golden
- Golden Boy
- Gotham Greens
- goVida
- Grain Place Foods

- Great Lakes Growers
- Grimmway Farms
- Grower Petes Organic
- Grown in Nature
- Happy Family Brands
- Hatch
- Himalania
- Homegrown Organic Farms
- Houweling's Tomatoes
- Husk
- I.M. Ripe
- Ian's
- Imperial Garden
- Imperial Gourmet
- Intergrow Greenhouses
- Intiyan
- JaynRoss Creations LLC
- Johnny's Organic Farm
- JUICY GEMS
- Juicy Limes
- Just Tomatoes, Etc.!
- JustFruit
- Kickers Powdered Food
- Enhancer
- Kokonutti
- Laurel Hill
- Little Duck Organics
- Live Gourmet
- Made in Nature
- Mary's Little Garden
- Mavuno Harvest
- Mediterranean Organic
- Minsa
- Monterey Farms
- Mucci Farms
- Muir Glen
- Multiple Organics
- My Nutrition Advisor

- Native Forest Distributed by Edward & Sons
- Natural Directions
- Nature Fresh Farms Inc.
- Nature's All Foods
- Navitas Naturals
- North Coast
- NOW Real Food
- Numi Organic Tea
- Nutrigold
- One Degree Organic Foods
- Oxen Hill Farm
- Ozuké
- Paradise Meadow
- Paramount Citrus
- Pearls
- Peggy's Premium
- Peru Heirloom
- Pines
- Pitaya Plus
- POM Wonderful
- powbab
- Pure Flavor
- Pure Planet
- Pure Wraps
- Purium Health Products
- Randall Family
- Red Hat Co-operative Ltd.
- Reese
- RENUKA
- ROLAND
- Royal Harvest
- Ruby's Rockets
- Russet House
- Sacha
- Santa Teresa
- Sea Salad
- Seapoint Farms
- SeaSnax

- Shenandoah Growers
- Silver Hills Sprouted Bakery
- Skagit Bounty
- Skagit Harvest Values
- Skagit Valley's Best
- Sol Bliss
- Somerfield Farms
- Sprouts Farmers Market
- Stahlbush Island Farms
- Stahlbush Island Farms
- Ingredients
- Stoneridge Orchards
- Summeripe
- Summertime Fresh
- Sun Seasoned Raw Foods LLC
- SunDate
- Sunfood Superfoods
- SunRidge Farms
- Sunset
- Sunset Kidz
- Sunvale
- Superberries
- Sweet Scarletts
- Sweetfrost
- TAMBOR
- Tap'n Apple
- Texas Grown
- That's It
- Tommy's Superfoods
- TopLine Farms
- Tree of Life
- Tropical
- TruVibe
- UFC Refresh
- Ultimate
- Vermont Village Applesauce
- Vernon M. Byler Farm
- Viva Labs

- Vivapura
- Watts Brothers
- Wild Veggie
- Wildbrine
- Windset Farms
- Wonderful Halos
- Woodstock

CEREALS AND BREAKFAST BARS (GO EASY ON THESE!)

- 18 Rabbits Inc.
- 365
- Andros
- Arnel's Originals
- Arrowhead Mills
- Australia's Own Organic Corn Flakes
- Back Roads Granola
- Back to Nature
- Bakery on Main
- Barbara's
- Be Free Bakers
- Beaujolais Granola
- Big Tree Farms Sweet Tree
- Birchwood Cafe
- Bobo's Oat Bars
- BOLA
- Boulder Granola
- Cadia
- Cascadian Farm
- Chappaqua Crunch Granola
- Chez Marie Inc.
- Chia Pod
- Chiarezza! OMG Foods Inc.
- Country Choice Organic
- Cream of the West
- Crofters
- Daddy's Muesli
- Dr. McDougall's

- Earnest Eats
- Earth's Best
- Eden
- Emmy's Organics
- Engine 2 Plant-Strong
- Enjoy Life Foods
- Envirokidz
- Erewhon
- Everspring Farms
- Everyday Superfoods
- familia
- Farm to Table Foods
- Field Day
- Fieldstone Organics
- Flahavan's
- Flav-R-Bites
- Freedom Foods
- Gatherer's Gourmet Granola
- Gluten Free Pantry by Glutino
- Glutenfreeda
- Glutenull Bakery
- Glutino
- Go Raw
- Golden Temple
- Grain Millers
- Grain Place Foods
- GRANDYOATS
- Grape-Nuts
- Green Quinoa
- Hail Merry
- Hemp Oil Canada
- Hodgson Mill
- Hol-Grain
- Holy Crap
- Immaculate Baking
- Jessica's Natural Foods
- Kashi
- KIND Healthy Snacks

- Lillabee Allergy Friendly Baking
- Love Grown Foods
- Lundberg Family Farms
- Manischewitz
- Martha's All Natural
- Mediterranean Organic
- Modern Oats
- Muesli Fusion
- Muesli Munch
- Munk Pack
- Namaste Foods
- Natural Directions
- Nature's Basket
- Nature's Path
- New England Naturals
- New York Superfoods
- NOW Real Food
- Nu Life Market
- Nutiva
- Nuts About Granola
- Ola!
- Old Wessex
- One Degree Organic Foods
- One Planet Foods LLC
- Paleo Hero
- Paleonola
- Pampas Rice/Organic Latin America
- Peace Cereal
- Plum Organics
- Power of 3
- Prana Foods
- PROBAR
- Purely Elizabeth
- Ruth's Foods
- Sambazon
- Secret Stash
- Seven Sundays
- Shortstacks

- Shredded Wheat
- Shreddies
- Silver Hills Sprouted Bakery
- Simply Balanced
- Simply Protein Mini Bars
- Simply Protein Nut & Fruit
- Simply Suzanne
- SunRidge Farms
- Tap'n Apple
- TeeChia High Performance Super Seeds Cereal
- The Chia Co.
- The Daily Nibble
- The Simply Bar
- Two Moms in the Raw
- twofold
- Udi's Gluten Free
- Uncle Sam
- Upfront Foods
- Van's Natural Foods
- Vigilant Eats
- Viki's Granola
- Vitacel
- Viva Quinoa
- Weetabix
- Wheat Montana
- Wholesome Chow
- Wholesome Happiness
- Wild Veggie
- Willamette Valley
- Woodstock

BREADS AND BAKED GOODS (GO EASY ON THESE, TOO!)

- 365
- Alpine Valley Bread
- Alvarado Street Bakery
- Among Friends
- AMOUN PITA

- Anna's Choice
- Annie's
- Arnel's Originals
- Arrowhead Mills
- Artizo
- Atlantic Saltines
- Barbara's
- Be Free Bakers
- Bear's
- Bell Bialy
- Berlin Natural Bakery
- Bin Bin
- Bliss Bread
- Bobo's Oat Bars
- Bona Dea
- Bonnievilles
- Bread SRSLY
- Brooklyn Bred — Damascus Bakery
- Buenatural
- Bumbalooza
- California Lavash
- Canyon Bakehouse
- CaveChick
- Cedar's Mediterranean Foods Inc.
- Chebe
- Chef Susanna's
- Cooggies
- Country Choice Organic
- Cup Cookies
- Dancing Deer
- Dave's Killer Bread
- Dendy & Co. Fine foods
- Doctor Kracker
- Earth's Best
- Easy Artisan
- EatPastry
- El-Milagro
- Emmy's Organics

- Ener-G Foods
- Enjoy Life Foods
- Eureka! Baking Co.
- Fabe's All Natural Bakery
- Fancypants Baking Co.
- FINN CRISP
- Franz
- Free Cookie Co.
- Gabbi's
- Ginnybakes
- Ginnyminis
- Gluten Free Pantry by Glutino
- Glutenfreeda
- Glutenull Bakery
- Glutino
- Goodbody
- GRATIFY
- Hodgson Mill
- Hol-Grain
- HomeFree
- Hope Crafted
- Hot Kid
- Ian's
- Immaculate Baking
- Indianlife
- Ines Rosales
- KA-ME
- Klara's Gourmet
- Koochikoo
- La Panzanella
- Lamonica's Pizza Dough
- Larder Baking Co.
- Lillabee Allergy Friendly Baking
- Liz Lovely Cookies
- Lucy's
- Mac-n-Mo's
- Madhava
- Main Street Gourmet

- Manischewitz
- MARCY'S
- Margarita's Tortilla Factory
- Marge's Bakery
- Maria & Ricardo
- Martha's All Natural
- Mary's Gone Crackers
- Metropolitan Gourmet
- MI-DEL
- Mighty-O Donuts
- Millchap Sweet Potato Co.
- Milton's Craft Bakers
- Molly B's Gluten-Free Kitchen
- Mt. Vikos
- Nairn's
- Namaste Foods
- Nana's Cookies
- Natural Nectar
- Nature's Bakery
- New Seasons Market
- Nothin' but Foods
- Old Cape Cod
- One Degree Organic Foods
- Ozery Bakery
- Pamela's Products Inc.
- Pampas Rice/Organic Latin America
- Peace A' Cake
- Permolex
- Première Moisson
- Pressels
- Pure Wraps
- Purely Elizabeth
- Q.bel
- Rustic Bakery
- San Francisco Flatbread
- sarahs fine foods
- Schwartz Brothers Bakery
- Shasha Co.

- Signature Passion
- Silver Hills Sprouted Bakery
- Simple Mills
- Smart Flour Foods
- Sophia's
- Spelt Right Foods
- Sprouts Farmers Market
- Stacey's Organic tortillas
- Stonefire
- Stonemill Bakehouse
- Sugar & Spice Market
- Sukhi's Gourmet Indian Foods
- Sunnyvale Bakery
- Sweet Earth Natural Foods
- Tasty Brand
- Terra Grain Bakehouse
- The Daily Nibble
- The Essential Baking Co.
- The Raw Vegan
- Tortilleria La Nina
- Tree of Life
- United Bakery
- Venice Bakery
- Vicky's Artisan Flatbread
- Vitacel
- Want-Want
- Wasa
- Westminster Crackers
- Whole Foods Bakehouse
- Whole Foods Market
- Whole Foods Market Bakehouse
- Wholesome Chow
- Wise Bites
- Wonderfully Raw Gourmet
- XO Baking Co.
- Zema's Madhouse Foods

BABY FOOD

The secret ingredients in many infant formulas are often soy or milk from

cows injected with rBGH. Many brands also add GMO-derived corn syrup, corn syrup solids, or soy lecithin.

The following five brands may contain GMO ingredients:

- Beech-Nut
- Enfamil
- Good Start
- Nestlé
- S imilac/Isomil

Here's a list of brands that have been verified to be GMO-free:

- Baby's Only (certified organic products)
- Earth's Best
- Gerber products
- HAPPYBABY
- Mom Made Meals
- Organic Baby
- Plum Organics

Now, here's one more important list. Aside from gravitating toward the trustworthy brand names above, be wary of these "invisible" sources of GMOs. These ingredients are often made wholly or partially of GMOs, so look for them on labels. Even if the bulk of the item you are buying is non-GMO, the presence of any of these is reason enough to avoid it.

- aspartame (also called AminoSweet, NutraSweet, Equal Spoonful, Canderel, BeneVia, E951)
- baking powder
- canola oil (rapeseed oil)
- caramel color
- cellulose
- citric acid
- cobalamin (vitamin B12)
- colorose
- condensed milk
- confectioners' sugar
- corn flour
- corn masa
- cornmeal
- corn oil

- corn sugar
- corn syrup
- cornstarch
- cottonseed oil
- cyclodextrin
- cysteine
- dextrin
- dextrose
- diacetyl
- diglyceride
- erythritol
- Equal
- food starch
- fructose (any form)
- glucose
- glutamate
- glutamic acid
- glycerides
- glycerin
- glycerol
- glycerol monooleate
- glycine
- hemicellulose
- high fructose corn syrup (HFCS)
- hydrogenated starch
- hydrolyzed vegetable protein
- inositol
- inverse syrup
- inversol
- invert sugar
- isoflavones
- lactic acid
- lecithin
- leucine
- lysine
- maltitol
- malt
- malt syrup

- malt extract
- maltodextrin
- maltose
- mannitol
- methylcellulose
- milk powder
- milo starch
- modified food starch
- modified starch
- mono- and diglycerides
- monosodium glutamate (MSG)
- NutraSweet
- oleic acid
- phenylalanine
- phytic acid
- protein isolate
- shoyu
- sorbitol
- soy flour
- soy isolates
- soy lecithin
- soy milk
- soy oil
- soy protein
- soy protein isolate
- soy sauce
- starch
- stearic acid
- sugar (unless specified as cane sugar)
- tamari
- tempeh
- teriyaki marinades
- textured vegetable protein
- threonine
- tocopherols (vitamin E)
- tofu
- trehalose
- triglyceride

- vegetable fat
- vegetable oil
- vitamin B12
- vitamin E
- whey
- whey powder
- xanthan gum

Two other notes for your GMO-free lifestyle:

- The only type of sugar that is unlikely to be GM is pure cane sugar — although, remember, sugar of any kind is pro-inflammatory

- One of the few types of cooking oil unlikely to be genetically modified is olive oil. Use it liberally, as some research shows it to be capable of boosting the immune system, lowering cholesterol, reducing stroke and osteoporosis risk, and even protecting against depression and cancers. But remember, it's best to use it raw, as it oxidizes in high heating uses.

Your (Nearly) Pesticide-Free Shopping Guide

You're on your way! Paying attention to the guidelines above will move you and your family significantly further from the worst foods in the American diet, and closer to robust health.

But keep in mind that even non-GMO foods are often doused with pesticides and herbicides.

In fact, some 65% of thousands of produce samples analyzed by the U.S. Department of Agriculture test positive for pesticide residues. And these synthetic chemicals have been shown to have a wide variety of negative effects on health, from increasing cancer risk to disturbing endocrine balance to compromising nerve function.

And these poisons are everywhere. For example, what's one of the worst foods you can buy at the grocery store?

Would it surprise you to learn it's that time-honored icon of healthy eating, the apple?

Of 48 types of produce tested recently by a leading environmental organization, apples bore the most residual pesticide. If you don't buy organic

versions, there is a 99% chance that your apple is contaminated with toxins that have been linked to a variety of serious health conditions.

Here's the whole list. The higher on the list, the higher the chance that it's contaminated:

1. Apples
2. Strawberries
3. Grapes
4. Celery
5. Peaches
6. Spinach
7. Sweet Bell Peppers
8. Nectarines — Imported
9. Cucumbers
10. Cherry Tomatoes
11. Snap Peas — Imported
12. Potatoes
13. Hot Peppers
14. Blueberries — Domestic
15. Lettuce
16. Kale/Collard Greens
17. Plums
18. Cherries
19. Nectarines — Domestic
20. Pears
21. Tangerines
22. Carrots
23. Blueberries — Imported
24. Green Beans
25. Winter Squash
26. Summer Squash
27. Raspberries
28. Broccoli
29. Snap Peas — Domestic
30. Green Onions
31. Oranges
32. Bananas
33. Tomatoes
34. Watermelon

35. Honeydew Melons
36. Mushrooms
37. Sweet Potatoes
38. Cauliflower
39. Cantaloupe
40. Grapefruit
41. Eggplant
42. Kiwi
43. Papayas
44. Mangoes
45. Asparagus
46. Onions
47. Sweet Peas — Frozen
48. Cabbage
49. Pineapples
50. Sweet Corn
51. Avocados

Although it ranks 12th on this list, potatoes — the most consumed vegetable in the U.S. — typically have more pesticide by weight than any other food.

The best response to this frightening list? Buy organic! Organic foods have been shown to have 31% less pesticide residue, fewer food-borne pathogens and more of a special nutrient type known as a polyphenols, which appear to lower cancer risks.

But if you can't find — or can't afford — organic produce, take heart. Here are 15 kinds of produce that, when grown conventionally, tend to have a light pesticide load. In many cases, that's because the food is typically peeled before it is eaten, and the poisons coating the peel get thrown away. So if you have to buy conventionally grown produce, buy these!

1. Avocado
2. Sweet Corn
3. Pineapple
4. Cabbage
5. Sweet Peas — Frozen
6. Onions
7. Asparagus
8. Mangoes
9. Papayas

10. Kiwi
11. Eggplant
12. Grapefruit
13. Cantaloupe
14. Cauliflower
15. Sweet Potatoes

Now that you know what to buy, we want to get you set up with some nutritious, delicious, and easy recipes that can kickstart your way to good health…

Simple Roasted Asparagus

Buying local, organic, in-season produce is a great way to ensure that you get optimal nutrients. Fruits and vegetables that have travelled thousands of miles before reaching the store shelf have a fraction of the vitamins they had when fresh-picked.

One of spring's tastiest vegetables is the slim, tender asparagus shoot. It's also one veggie you want to be sure to buy locally and in season, as it has a shorter shelf life than other vegetables and should be consumed within two days of harvest to maximize nutrient content.

Along with being quite tasty, here are the top three reasons to add asparagus to your next meal:

1. It's rich in vitamin A, vitamin C, and iron. One cup contains 20% of your vitamin A needs for the day in the form of beta carotene, an important antioxidant.

2. It contains 70% of your daily vitamin K needs. Vitamin K is crucial for proper blood clotting.

3. Asparagus contains inulin, a dietary fiber that feeds the beneficial microbes in your gut.

Directions

1. Wash one pound of asparagus, snapping off the tough ends.

2. Spread as a single layer on a baking sheet.

3. Drizzle with three tablespoons of olive oil, coconut oil, or melted clarified butter.

4. Bake at 400 degrees for about eight minutes (less for very thin stalks) or until fork-tender.

5. Sprinkle with salt, pepper, and freshly grated Parmesan and Romano cheese if desired.

And remember, while a farmers market beats the supermarket, the freshest local produce comes from your backyard garden. Once established, asparagus is perhaps the easiest vegetable to grow at home — a little fertilizer and water and one bed of this perennial can produce every spring for up to 25 years!

Turmeric-Roasted Cauliflower

Ingredients:

1 head cauliflower
1 teaspoon turmeric
¼ teaspoon garlic powder
Salt and pepper
2 tablespoons olive oil

Instructions:

1. Heat your oven to 400 F. Grab a rimmed baking sheet.

2. Chop the cauliflower into small florets.

3. Toss the spices, salt, pepper, and olive oil together in a large bowl. Add the cauliflower and stir until coated in spice mix. Bake on the baking sheet until browned, stirring halfway. Cooking time is usually about 20 minutes, but check for your desired done-ness.

Roasted Brussels Sprouts with Bacon and Gorgonzola

High Fat, Low Carb, Maximally Delicious

In recent weeks, my wife, Laurie, and I ate a swath through three American cities with active culinary scenes — Los Angeles, Washington, D.C., and Portland, Oregon, — and were pleased to find a variation on this dish featured in "foodie" destination restaurants in each city.

Clearly, Brussels sprouts, bacon, and Gorgonzola are having a mutual moment in U.S. food culture. And why not?:

- While mushy steamed or boiled Brussels sprouts offend man and God, these miniature crucifers offer delightfully nutty-sweet taste and appealing toothsome texture if treated with dry heat and respect. Brussels sprouts are, in my view, close to the perfect vegetable: filling, highly nutritious (especially rich in vitamins K and C) and offering potent protection against cancer due to their abundance of glucosinolate, a major chemical building block of numerous cancer-protective compounds created by the body

- Gorgonzola, the love child of full-fat cow's milk and Penicillium glaucum, is the Italian upgrade of French bleu cheese and utterly irresistible. Look for the real deal, imported from the north Italian regions of Lombardy and Piedmont, where they give it a full four months to ripen

- Do I — does anyone — need to explain bacon's appeal? I recommend digging deep and getting a quality, locally-sourced, thick-cut variety. Expensive, but this recipe does not use much.

So back at the Arizona homestead, Laurie began replicating, cross-breeding, and selectively upgrading the delightful dishes we found and came up with this "recombinant" synthesis.

Ingredients:

One pound Brussels sprouts
½ cup virgin coconut oil
Three slices of thick-cut natural bacon
1/2 cup crumbled Gorgonzola
Salt to taste

Directions:

Fry bacon until just short of crisp. (You can also bake it, using parchment on a baking sheet, at 350 F for 30 minutes, flipping halfway through. I do this on weekends with a pound of bacon and then throw pieces into salads and other dishes throughout the week.)

Rinse the sprouts, remove their stem ends, and cut into pieces roughly 1/2 inch square.

Saute sprouts in about 1/4 cup coconut oil until they start to brown, roughly 10 minutes.

Salt to taste. We use about 1 teaspoon coarse or ½ teaspoon fine salt.

Transfer to baking sheet, put into 475-degree preheated oven. Give it a stir just once when the sprout tips get brown. Roast about 10 minutes total.

Remove from oven and stir in chopped bacon and coarsely crumbled Gorgonzola. Let sit for five minutes and eat.

A Simple Sweet Potato Treat for the Winter Ahead

The best diet is not complicated. Its mainstays are vegetables, pasture-raised animal protein, low-sugar fruits such as berries, and fermented full-fat dairy, including yogurt and cheese.

In other words, high-fat, low-carbohydrate. My wife and I avoid grains and sugar assiduously, but we do venture into the carb wilderness on occasion, most frequently when we enjoy a simple side dish of sweet potatoes.

Titian-hued Ipomoea batatas offers not only delectable taste, but also two big health advantages over the common white potato — a 58% lower glycemic index (a measure of a food's ability to raise blood sugar) and far higher nutrient density. The sweet potato is especially rich in beta-carotene, which the body converts to vitamin A.

A DELICIOUS AND SIMPLE METHOD OF PREPARING SWEET POTATOES

Step 1: Wash a couple of medium-sized, organic sweet potatoes. Pat dry. Cut into pieces roughly the size of your thumb. (No need to peel. The skin is delicious.)

Step 2: Toss well with about 1/4 cup of virgin coconut oil. (Using coconut oil is important. As a saturated fat, it is heat stable and resists oxidation — oxidized fats kick off your body's inflammatory response. You can use organic leaf lard or duck fat as well, but by no means use soy, corn, or canola oil!) You can also toss in 1/4 teaspoon of salt and a sprinkle of turmeric.

Step 3: Spread on a baking sheet. Bake at 425 degrees Fahrenheit for about 25 minutes, stirring once about halfway through the cooking time. Enjoy while still warm. Simple and delicious!

Egg-Avocado Fat-Intensive Salad

I am a huge fan of this breakfast and eat it at least four mornings a week. It provides precisely the high-fat, low-carb, moderate protein boost I need to optimize my fat burning potential all day. I cook the eggs and bacon on the weekends ahead of time, so the whole dish can be assembled each morning in a couple of minutes.

In a bowl, place:

Two peeled hard-boiled eggs
One ripe avocado
One piece of cooked bacon, snipped into pieces
Juice of one lemon
A generous dollop of olive oil — at least 2 tablespoons
A few pieces of sun-dried tomato

No need to stick precisely to these ingredients. The dish's fundamentals are the eggs, avocado, and olive oil. The rest can be customized with ingredients of your choice, as long as they are low in carbohydrates — a sprinkle of grated cheese, for example.

Use a couple of steak knives and a scissoring motion to chop it all coarsely in the bowl, mix, and enjoy!

Reduce Prostate Cancer Risk by 53% With This Delicious Snack

A health note for men: A new study in the Journal of the National Cancer Institute followed 50,000 men ages 40–75 who didn't have prostate cancer. Over the next 24 years, the ones who ate the most **lycopene** had 28% lower risk of getting any type of prostate cancer and a 53% reduction in lethal prostate cancer.

The richest sources of lycopene are tomatoes and tomato products. To supercharge your lycopene absorption, eat your tomatoes cooked, as heat improves lycopene's bioavailability, and add some healthy saturated fat

(the kind found in butter and cheese), which also increases absorption.

But I don't suggest getting this combo via traditional pizza, which delivers the cooked tomatoes and fatty cheese with a big dose of unhealthy carb-intensive crust.

Instead, try this simple, two-ingredient recipe:

1. Slice tomatoes (preferably organic, heirloom varieties) and top the slices with your favorite grated full-fat cheese.

2. Pop under the broiler until the cheese melts and bubbles. If you want to get fancy, sprinkle fresh or dried oregano or basil on the tomato before adding the cheese.

One makes a snack; three or four are the foundation of a full meal. Easy, quick, healthful, and delicious!

Liver for Liver Haters

Enjoy Nature's Superfood With This Delectable Dish

If you are squeamish about liver, try pate.

I'd recommend starting with this quick, classic recipe, which is adapted from one by master chef Jacques Pepin. A little bourbon and a lot of butter provides a luscious "cover" that allows the liver to arrive at the party nearly undetected. Served on parmesan crisps — or even on a toasted round of crusty baguette, if you tolerate the gluten and don't make it a habit — it's heaven in your mouth.

Once you make it, you'll see that there are basically three ways to experiment with the flavor:

- **Liquor.** I like to use bourbon, which has a nice, smooth, come-hither taste. Cognac or brandy will give you a similar result. Port/Madeira will add a darker, fruity note. If you want something more aggressive, try Jack Daniels, or a flavor-forward single malt scotch. Personally, I'm looking forward to using a smoky Laphroaig in my next batch

- **Spices.** This recipe uses thyme, salt, and pepper — the classic flavor profile. But feel free to add marjoram and sage, or some of the sweeter spices like nutmeg and allspice, or even grated orange rind (which might suggest experimenting with Grand Marnier as the liqueur). There are no wrong answers when a recipe is as quick and easy as this one!

- **Butter.** More or less — that's basically it. Cutting back on the butter intensifies the liver flavor.

Here's the recipe:

Ingredients:

1/2 pound chicken livers, well-trimmed
1/2 small onion, thinly sliced
1 small garlic clove, smashed and peeled
1 bay leaf
1/4 teaspoon thyme leaves
Kosher salt
1/2 cup water
1½ sticks unsalted butter, at room temperature
2 teaspoons Cognac or Scotch whisky
Freshly ground pepper
Toasted baguette slices, for serving

Directions:

1. In a medium saucepan, combine the chicken livers, onion, garlic, bay leaf, thyme, and 1/2 teaspoon of salt. Add the water and bring to a simmer. Cover, reduce the heat to low and cook, stirring occasionally, until the livers are barely pink inside, about three minutes. Remove from the heat and let stand, covered, for five minutes.

2. Discard the bay leaf. Using a slotted spoon, transfer the livers, onion and garlic to a food processor; process until coarsely pureed. With the machine on, add the butter, 2 tablespoons at a time, until incorporated. Add the Cognac, season with salt and pepper and process until completely smooth. Scrape the pâté into two or three large ramekins. Press a piece of plastic wrap directly onto the surface of the pâté and refrigerate until firm. Serve chilled.

Make Ahead

The pâté can be covered with a thin layer of melted butter, then wrapped in plastic and refrigerated for up to one week or frozen for up to two months.

To Flip — or Not to Flip?

Here's How to Grill the Perfect Steak

My wife, Laurie, and I eat steak roughly once a week. We've been married for 30 years. That's north of 1,500 steak-cooking sessions, along with (cumulatively) days of book and online research on various techniques.

Suffice it to say, I've studied this.

The glories of steak as a regular meal are manifold — quick and easy to make, always delicious, and exceptionally healthful. To quickly recap, beef is an excellent source of vitamin B-12, vitamin D, and saturated fat — all of which promote brain and heart health.

We incline toward grass-fed, grass-finished beef whenever possible. We purchase from a local rancher, but even Trader Joe's sells such steaks these days.

Now, my hard-won insights:

Cooking steaks outdoors on a propane or charcoal grill is absolutely, positively, the way to go. They can be pan-fried, oven-broiled, and otherwise cooked indoors, but it is a godawful mess that invariably mucks up the oven, sets off the smoke alarm, and generally destroys domestic felicity.

Some people argue that propane makes an inferior steak compared to charcoal. That hasn't been my experience. The ability to fine-tune temperature to create perfect doneness, I've found, more than compensates for any subtle flavor imparted by charcoal.

My local Lowe's is practically *giving* propane grills away these days. Just $99, the price of a nice steak dinner for two at a good restaurant, will set you up with a small grill. The notion that grill cooking must wait on warm weather is nonsense — I cooked plenty of these in the snow in Maine. If you can't stand to be outdoors in the cold for 10 minutes, you have more problems than I can address here.

Flip your steak more than once. There are two schools of thought regarding flipping frequency — the flip-once school and the flip-more-than-once school. I am a firm believer in the second technique, due to the fluid dynamics of steak. Flipping often *reverses the gravitational flow of juices,* so they don't drain out (the same principle that makes rotisserie meat so luscious).

So here's the whole technique.

With all burners on high, preheat the closed propane grill to 450 degrees F. This takes about five minutes.

Turn all burners to medium-low.

Put naked steaks on the grill. I don't pre-salt or pre-pepper, as the former can draw juices out prematurely and the latter gets burned.

If the steak is 1 inch thick, cook two minutes on each side, then one minute on each side, for a total of six minutes (I use my iPhone's stopwatch feature).

If the steak is 1½–2 inches thick, cook three minutes on each side, then two minutes on each side, then one minute on each side, for a total of 12 minutes.

I always close the lid during these cooking intervals. Again, it seems to help keep dryness, the bane of a good steak, at bay.

Let the steak rest for 10 minutes before eating. It will keep cooking during that time, and warm steak tastes better than hot steak.

Yield: glorious, medium-rare steaks that never disappoint.

Why Fry When You Can Bake?

Even Cooking… Easy Cleanup… It's Time to Make the Switch to Baked Bacon

Americans have been urged for more than 50 years to incline toward vegetarianism, due to the supposed cardiovascular risk (now disproved) of eating meat in general, and fatty bits like bacon in particular.

As a result, the many valuable nutrients in bacon are precisely the ones in which Americans are likely to be deficient. For example, along with the nutrients Kris lists, bacon provides abundant choline, which is essential for nervous system function. American diets tend to be woefully short of this vital compound.

One consequence of choline deficiency? Anxiety! Eating bacon just might be a solution to the modern upswing in anxiety disorders.

In short, bacon is good for you.

In writing an article about supercentenarians (people who live beyond 110 years), I was struck by how many of them ate bacon regularly. It appears that they never got the memo that it would kill them and consequently outlived the hordes of "health authorities" who argued against it.

To me, the biggest potential hazard and hassle of cooked bacon is in the frying. This common method of preparation has two big drawbacks:

- The parts of the bacon in closest proximity to the frying pan tend to burn, creating potentially carcinogenic compounds called heterocyclic amines

• Frying makes an awful grease-spatter mess on the stovetop.

The solution? Baked bacon!

I make this dish almost every Sunday, cooking up about one and a half pounds of bacon. I get it either from Whole Foods or my friends at The Meat Shop, a butcher here in Phoenix that offers local free-range and grass-fed pork and beef.

The process begins with a stainless steel cookie sheet covered with parchment paper, and then raw bacon:

The raw, thick-cut, pasture-raised bacon laid out in a neat row on a parchment-lined baking sheet. Skeezix is impressed.

Bake the bacon in a preheated oven set at 350 degrees for 20 minutes.

After 20 minutes, use tongs to flip each piece over. Bake for 15 minutes more.

The finished bacon. No burned or raw spots; baking ensures each piece is uniformly cooked and delicious!

Let it cool for about 10 minutes and then put into an airtight container (I use the Glasslock brand, available at Amazon).

I lift the pieces out of the pooled grease, but I don't otherwise drain the bacon — the lovely, clinging fat is part of both the taste and health benefit. But you can pat each piece down with paper towels before storage if you wish.

And cleanup is easy — just discard the parchment and put the virtually spotless baking sheets in the dishwasher.

Throughout the week, I use the bacon in multiple ways: snipped with kitchen shears over freshly steamed greens or a salad, chopped and added to scrambled eggs, or — my favorite — just grabbing a couple of cold pieces out of their container for a quick, satisfying low-carb snack.

No-Cook Coconut-Collagen Bars

Incorporate Collagen Into Your Diet With This Simple and Tasty Treat

Until this month, I'd been consuming hydrolyzed collagen in the simplest form possible — 2 tablespoons dissolved in a cup of water — for well over a year.

Then I discovered that several paleo-oriented websites published recipes that use the powder as an ingredient in a healthful, homemade protein bar.

Great idea!

Most of the recipes I found provide a healthful dose of coconut butter and oil along with the collagen. As opposed to typically carb-intensive "sports" bars, these won't spike your blood sugar — instead, they'll provide steady energy to propel you through a productive day.

After a few days of experimentation, I came up with the recipe below.

It is similar to some I've seen online but has less honey — I use a scant teaspoon rather than a tablespoon — and no vanilla, which I find just obscures the pleasant coconut taste.

Ingredients:

½ cup coconut butter which is simply pureed whole coconut flesh. (My favorite brand is Nutiva's "Coconut Manna," available at Whole Foods and Amazon).

1/4 cup beef collagen hydrolysate (my favorite brand is Great Lakes, available at Amazon).

1 teaspoon honey

1 tablespoon coconut oil

Pinch of sea salt

Step 1

In a cool kitchen in winter, coconut butter — the main ingredient in this recipe — gets rock hard. So remove the lid and put the jar in a pan of warm water for at least 30 minutes until it liquefies. Then stir until creamy.

Step 2

Put all ingredients in a bowl and stir for a couple of minutes until smooth.

Step 3

Flatten the doughy mixture on parchment on a baking sheet, score into 1-inch squares, and refrigerate for at least 30 minutes.

Step 4

Break squares apart and enjoy! These keep, tightly covered in the refrigerator, for at least two weeks.

One more benefit of collagen — I find it has a unique ability to suppress

appetite. Though these are small, a couple of these tasty squares after a modest lunch keep me satisfied until dinner.

This recipe was a revelation to me. Lots of people eat "power bars" these days, but these nearly always consist of cheap commodity grains and sugars. They are more like cookies than nutritious food.

The concept of using coconut butter and coconut oil to deliver a healthful, powdered nutrient in a "food bar" combines convenience with nutrient density in an appealing way.

I've found that turmeric, cocoa, ginger — even a bitter, blood-sugar-lowering herb called gentian — can be added to this recipe along with the collagen, leading to tasty bars that are high in healthy fat, low in carbs, and packed with anti-inflammatory goodness.

They are wonderful to munch along with my after-meal coffee. Try your own experiments!

Corn Flakes Have Nothing on This Nutrient-Dense Breakfast

A High-Fat, Low Carb Breakfast That's Fast, Easy to Make, and Will Keep You Going

Grain-intensive American breakfast foods — pancakes, waffles, cereal, biscuits, and toast — are undeniably tasty.

Unfortunately, they are also the kind of foods that optimize fat formation. They do this by spiking insulin, the hormone that transports fat into the cells for long-term storage.

These foods are endlessly promoted not because they are healthy, but because they are cheap, allowing enormous profit margins for their purveyors.

Consider that a single pancake from the International House of Pancakes costs $1.32. By my estimate, that pancake's raw ingredients cost about 4 cents.

So forget "tradition" — which isn't all that traditional anyway, as carb-intensive breakfast choices in the U.S. date back roughly to W.K. Kellogg's invention of corn flakes in 1894.

Instead, consider the fact that breakfast presents a wonderful opportunity to get a head start on the day's requisite five–nine servings of fruits and vegetables. And among veggies, dark leafy greens are both the quickest cooking and most nutrient dense. The amount of cooked kale in this

recipe, for example, provides more than the entire Daily Value for vitamins A, C, and K.

BODACIOUS BREAKFAST GREENS

You could call this a deconstructed omelet, morning stir-fry, or veggie scramble. But "Bodacious Breakfast Greens" captures its energizing spirit.

This is what I've eaten for breakfast most days for the last four years, ever since I finally made a full commitment to high-fat, low-carb, nutrient-dense eating.

Here's what you need:

- 2 tablespoons organic coconut oil
- 1 standard bunch (roughly 8 ounces) of leafy greens such as Tuscan kale, broccolini, rapini, or Swiss chard
- 4 ounces of animal protein. This is usually pastured eggs, but I sometimes use leftover cooked chicken, steak, or salmon
- Optional: 3 ounces of cheese
- Optional: 2 ounces of nuts such as walnuts
- Optional: a few shakes of some serious hot sauce — I'm partial to Trader Joe's Habanero Hot Sauce.

Melt coconut oil in a heavy 6-quart stockpot. I prefer this vessel for sautéing because the high sides keep it from making a mess on the stovetop. Sauté greens for about four minutes on high heat until they are reduced to roughly one-third their original volume.

Add eggs or other protein and optional cheese, nuts, and/or hot sauce and stir for another three–four minutes.

Serve hot.

If you are accustomed to carb-intensive breakfast fare, greens for breakfast may seem unappealing at first. But I assure you, try it for a week and you'll come to crave the nutrient-dense boost that you receive from this delicious, low-carb dish.

Pastured Egg Nog Nirvana

Start Your Morning with this Supercharged Vitamin Cocktail

This low-carb eggnog is an excellent choice for your first small "meal" of the day.

Be sure to make this with "pastured" eggs — that is, ones from a chicken

that runs on grass and eats bugs and worms. I get them from a local grower, but Whole Foods sells a brand called "Vital Farms."

Yes, they're more expensive, but pastured eggs have up to twice the omega-3 fatty acids and seven times the beta-carotene of typical commercial eggs. Such eggs make a fantastic breakfast in dishes like my Bodacious Breakfast Greens, which I still enjoy regularly.

How can you get even more nutrient density from these eggs? Eat them raw, and consider eating only the yolks.

THE RAW TRUTH

A careful analysis of antioxidant levels in a recent study showed that raw chicken eggs have twice the antioxidant values of microwaved, boiled or cooked eggs.

To further boost nutrient density, I consume only the yolks, as these contain by far the largest concentration of vital fat-soluble vitamins. Egg whites are rather nutrient-poor and contain a substance that binds to biotin, a vital nutrient.

The yolks' high cholesterol levels won't raise blood levels of cholesterol in most people. Instead, the liver responds by making less cholesterol. And if blood levels do increase slightly, that's not necessarily bad, as low blood cholesterol, in fact, raises mortality risk, especially in people over 60.

But aren't raw eggs dangerous? No, actually. Only one in 30,000 commercial eggs carries salmonella. And there's good reason to believe pastured eggs are even safer than that, as pastured chickens, unlike commercially raised chickens, don't live in crowded conditions that tend to foster disease.

THE RECIPE

Using pastured eggs, separate three egg yolks from the whites. I use the low-tech method: Crack the egg into your open palm, spread your fingers slightly and let the white flow through.

Place the yolks in a juice glass.

Add a quarter cup of your liquid of choice. I use Organic Valley grass-fed milk from Whole Foods, but you can use juice, coconut milk or even water.

If desired, add roughly half a teaspoon of organic maple syrup for a touch of sweetness. Lately, I've skipped this step, as I've come to enjoy the yolk flavor on its own.

Beat roughly 40 strokes with a spoon until thoroughly blended. Drink.

BOTTOM LINE

The nutrients that this little morning cocktail delivers in abundance are precisely those in which Americans are likely to be deficient: vitamins A, D and B12.

This recipe, if it can be called that, is the essence of simplicity — it can be made in roughly three minutes, leaves virtually no mess and is deeply satisfying in a way that's very difficult to describe. I've found that no morning is complete without it.

Cheat Sheet

Many of the foods that you've been avoiding (and missing) are actually beneficial for your health. Saturated fats can be put back on your menu, allowing you to indulge.

However, I do realize that by exposing these health secrets, I've taken a few things away from you. Grains, carbohydrates, white flour, and sugars have come to permeate our diets for a reason: They're delicious!

I do stand by the fact that they should be avoided. One famous science journalist who helped to change the conversation about saturated fats is Gary Taubes. In his book Good Calories, Bad Calories, Taubes "argued that refined carbohydrates and sugars in our diet are what cause obesity, diabetes, and related diseases, and not the dietary fat or the 'excess calories' that are thought to come from eating more than we should."

He, along with many other nutritionists and scientists who are starting to see the light, believes that insulin contributes largely to obesity. And insulin spikes when you eat carbohydrates.

But what if you like foods like pancakes, mashed potatoes, and pizza? It might not be enough for us to give you steak and take away all of these delicious treats.

I will show you how you can STILL enjoy those foods without risking your health. As I mentioned, the steak and wine diet is about doing what you enjoy… it's not a painful, lose-20-pounds-fast solution. It's about loving life and being good to your body.

I know it's not easy to significantly lower your carb consumption, even if you do get to have steak and butter in their place. To try to make that a little easier for you, I have assembled some well-tested recipes for you below.

These are all great for you, and taste delicious as well.

Pancakes

Pancakes have long been frowned upon as an unhealthy breakfast choice. Unfortunately, with their high carb content, I'd have to agree in saying that you should steer clear of traditional pancakes for breakfast. However, by substituting the white flour with healthy alternatives, you avoid an unnecessary insulin spike early in the morning.

Almond Flour Pancakes — from **PrimalPalate.com**

Ingredients:

1¾ cup blanched almond flour
2 pastured eggs, whisked
½ tsp salt
1 tsp pure vanilla extract
½ tsp ground cinnamon
¼ tsp ground nutmeg
1 cup water
1 tbsp salted butter, for frying

Directions:

1. In a small mixing bowl, whisk two eggs.
2. Pour almond flour, salt, cinnamon, and nutmeg into a medium-sized mixing bowl.
3. Add vanilla extract and eggs to the bowl.
4. Mix with a wooden spoon to combine.
5. Add water, and continue to stir.
6. Heat 1 tablespoon of grass-fed butter or coconut oil in a large nonstick skillet.
7. Using 1/8 cup, scoop batter into the frying pan, leaving enough space in between pancakes
8. to flip.
9. Cook 2 minutes on the first side, flip, and cook for a remaining 1–2 minutes. Add additional cooking fat as needed. (It helps to flip pancakes back and forth a bit to ensure they are cooked through.)
10. Top with your choice of grass-fed butter or coconut oil, and a sprinkle of cinnamon, and serve.

Banana Pancakes

Ingredients:

1 egg
2 tbsps almond butter
2 ripe bananas
Shredded coconut
Coconut oil
Ground cinnamon
Honey (if desired)

Directions:

1. Mash the two bananas with a fork. Get the texture to your preference — it's OK to leave it a little lumpy, if you don't mind it.
2. Crack the egg into the banana mixture, mixing it in.
3. Add almond butter, shredded coconut, and a sprinkle of cinnamon. The coconut will just help hold the batter together — you can play around with how much you would like to add.
4. Heat either coconut oil or butter in a frying pan.
5. Scoop in the batter, keeping on a low heat. The pancakes will be ready to flip once bubbles rise to the top. Generally, it takes about 2–3 minutes on each side.
6. Drizzle honey over the pancakes and enjoy!

Added benefit: Cinnamon is proven to be great for helping to keep your blood sugar at a more consistent level. In this case, it will be great to balance the sugar from the bananas.

Sandwich Bread — from guiltykitchen.com

One of the biggest struggles I've personally had with this diet is the absence of bread. An English muffin for breakfast and a sandwich for lunch are easy, accessible meals that I used to believe were healthy.

Luckily, if you can't give that up, there are plenty of "breadless breads" out there. Below is one recipe I've grown to love.

Ingredients:

3/4 cup soaked almond butter, smooth (store-bought works fine too)
6 pastured eggs
2 tbsp honey
1/4 cup coconut oil, melted
1/2 tsp apple cider vinegar
1/4 cup ground golden flax
3 tbsp coconut flour
1 tsp baking soda
1/2 tsp sea salt

Directions:

1. Preheat oven to 350 degrees F. Line an 8×4-inch loaf pan with parchment, grease well with coconut oil.

2. In a large bowl, blend the almond butter, eggs, honey, coconut oil, and apple cider vinegar with an immersion blender.

3. In a separate bowl, combine the flax, coconut flour, baking soda, and sea salt. Mix the dry into the wet, pour into the greased and lined loaf pan, and bake for 35–40 minutes.

4. Remove from oven and allow to cool in pan 10 minutes. Remove from pan by pulling up on the parchment. Set on wire rack to cool completely.

5. Store in an airtight container at room temperature for 3–4 days, in the fridge for 7–10 days, or in the freezer for a month or so.

Pizza

Perhaps the ultimate "sin food," any dietician will be quick to tell you to avoid this delicious, cheesy, greasy pie. However, you now know that the real problem with pizza is the flour-intensive crust. However, there are ways to turn pizza into something that can be enjoyed not only for the taste, but also for the health benefits.

Don't be afraid when I introduce these two words: cauliflower crust.

Despite what you may think, cauliflower crust holds together nicely to form a slice that you can pick up and enjoy just like you would one from

your local pizza shop.

And you can still include all of the toppings you love: cheese, bacon, veggies, you name it.

I'm going to give you a recipe for cauliflower crust that I think you'll really enjoy. This can sometimes take a few tries before you get it just right, so don't be discouraged! It's super simple once you get the hang of it.

Ingredients:

2 cups cauliflower
2 cups shaved mozzarella cheese
2 eggs

Directions:

1. Preheat oven to 450 degrees F.
2. Grate the cauliflower or grind in a food processor.
3. Mix eggs, cauliflower, and mozzarella in a bowl. As you do, remove any larger chunks of cauliflower — they won't blend well.
4. Line a pizza pan with parchment paper — this helps prevent it from sticking. Don't oil the pan — cheese does that. Put "dough" mixture on the pan and evenly press it into a thin, round crust. Be sure to make it pretty thin.
5. Put in the oven for 15 minutes.
6. Then put toppings on — veggies, meat, sauces, as long as there's no sugar or high-fructose corn syrup. (We encourage a bacon & meat lover's pizza, personally.)

This is just one option for delicious, healthy pizza. For more great recipes, check out: PaleoGrubs.com/pizza-recipes

Cheesy Garlic Bread — from cutthewheat.com

I don't know about you, but I am a sucker for garlic bread. Warm, cheesy, doughy foods have always been a weakness of mine, and this is no exception. Luckily, it's possible to make this treat without the bread!

Ingredients (for bread base):

1¼ cups almond flour
1 tbsp coconut flour
3 egg whites, beaten until fluffy
2 tbsp olive oil or avocado oil
1/4 cup warm water
1 tsp live yeast granules
1 tsp coconut sugar (or honey or molasses — will be eaten by yeast)
1/2 cup shredded mozzarella cheese
1/4 tsp salt
2 tsp baking powder
1/4 tsp garlic powder

Ingredients (for topping):

1 cup shredded mozzarella cheese
2 Tbsp butter, melted
1/4 tsp garlic powder
1/4 tsp salt
1/2 tsp Italian seasoning

Directions:

1. Preheat oven to 400 degrees F.

2. In a large bowl, combine almond and coconut flour, salt, baking powder, garlic powder, and xanthan gum. Stir well.

3. In a small cup or bowl, combine warm water and sugar and stir until dissolved, and then add yeast. Set aside for a few moments.

4. To the flour mixture, add olive oil and yeast-water mixture and stir well with a rubber spatula. Add in beaten eggs and continue to mix.

5. Add in the 1/2 cup mozzarella shreds and mix gently with your spatula until a nice dough is formed and cheese is mixed well throughout.

6. Grease a 9×9-inch square cake pan or large cookie sheet. Put batter into cake pan or cookie sheet. If you're free-forming on a cookie sheet, loosely form the dough into a rectangle or square.

7. Bake for approximately 15–17 minutes or until the sides of the crust turn golden brown. Remove and top.

8. In a small bowl, combine butter, garlic powder, and salt. Mix well and then brush over the top of the garlic bread base. Be sure to get the butter over every inch!

9. Top the bread with shredded mozzarella cheese, and then sprinkle that with Italian seasoning.

10. Bake for about 10 minutes or until cheese is melted. For final 3 minutes, turn broiler on to brown the cheese.

11. Remove from oven and let bread stand for 5–10 minutes before serving (if you can wait that long).

Pasta

One of the most difficult parts of eating this way is the lack of pasta in my diet. Pasta is quick and easy to make, and can be prepared in so many ways that it keeps things interesting.

Luckily, you can still have the taste of the meals you love without the harmful carbohydrates. Below are two of my favorite recipes to help get around the pasta problem.

EGGPLANT LASAGNA

Ingredients:

(Makes 8 servings)
2 large eggplants
Olive oil
Salt and ground black pepper — to taste
1 pound ground beef
48 ounces chunky tomato sauce
2 cups shredded mozzarella cheese
1 cup ricotta cheese

Directions:

1. Preheat oven to 375 degrees F. Oil two baking sheets.

2. Slice both eggplants into rounds, about ¼ inch thick.

3. Bake eggplant slices in the preheated oven for 20–25 minutes. Flip eggplant and bake an additional 20–25 minutes, until soft and golden brown.

4. Remove eggplant from the oven and increase temperature to 400 degrees F.

5. Heat butter in a skillet over medium-high heat and add ground beef. Season beef with salt and ground black pepper.

6. Cook and stir until beef is crumbly, evenly browned, and no longer pink, about 10 minutes. Drain excess grease.

7. Stir tomato sauce into ground beef; bring to a simmer and set sauce aside.

8. Lightly grease a 9×13-inch baking dish with coconut oil or butter

9. Place 1/3 of the eggplant slices on bottom of the dish.

10. Pour 1/3 of tomato sauce with ground beef on top of eggplant layer.

11. Sprinkle 1/3 of mozzarella cheese on top of sauce layer.

12. Spread ricotta cheese on top of mozzarella and sauce.

13. Repeat 2 more times, finishing with a layer of mozzarella cheese.

14. Bake uncovered in the preheated oven until cheese is melted and sauce is bubbling, 10–15 minutes.

15. Remove from oven and allow to cool for 5 minutes.

SPAGHETTI SQUASH

Spaghetti squash is easy to prepare and can act as a substitute for pretty much any pasta dish you love. It comes out like an angel hair pasta — thin and delicate. It can be topped with anything you like: spaghetti and meatballs, pesto, carbonara, Alfredo — you name it!

Below are instructions on how to prepare the squash. From there, you can create any number of meals!

Directions:

1. Preheat oven to 375 degrees F.

2. Cut the squash in half, lengthwise. It can be tough, so be sure to use a chef's knife.

3. Use a spoon to scoop out any seeds or excess, stringy flesh from the center. It will look a bit like a pumpkin once it's opened — it should be clear what to remove. Once you're done, it should be smooth.

4. Brush the inside of each half with butter and sprinkle with coarse salt and freshly ground black pepper.

5. Place cut sides down on a rimmed baking sheet, or in a roasting pan, and put into the oven.

6. Bake for about 40 minutes, or until you can easily pierce the squash with a fork.

COOKIES

I hope you didn't think that I had forgotten about dessert.

You might be surprised to find that there are plenty of delicious dessert recipes out there that won't load you up with unnecessary carbs and sugars.

Below is one such recipe that I really think you'll enjoy, from **17Recipes.com.**

Ingredients:

1/2 cup raisins
2½ cups hazelnut or almond flour
1 tsp baking soda
1/8 tsp salt
2 Tbsps coconut oil
1 egg
1 tsp vanilla extract
1/4 cup unsweetened coconut flakes
1/2 cup chocolate chips (make sure that you are using dark chocolate, with a high percentage of cacao content)

Directions:

1. Preheat oven to 350 degrees F.
2. Put raisins and flour in food processor, and blend until the raisins

are finely chopped.
3. Add baking soda and salt and blend for a few pulses.
4. Add oil, egg, vanilla extract. Pulse until blended. Do not overblend, or the dough will get too greasy.
5. Mix chocolate chips and coconut flakes in by hand.
6. Place dough on cookie sheet — each ball of dough should be about the size of a walnut.
7. Bake for 8–10 minutes, until golden brown.

GOTT IM HIMMEL! THAT'S GOOD SAUERKRAUT!

Five years ago, Andrew Weil, MD, invited me into the kitchen of his Tucson kitchen, spoke these fateful words, and gave me a conspiratorial wink.

I was at his home to discuss a writing project. But aside from being America's best-known authority on natural health and healing, Weil was—and is—a brilliant and dedicated gastronome:

- Exhibit one: He has his own chain of hugely successful True Food Kitchen restaurants
- Exhibit two: His kitchen has a walk-in refrigerator.

So the implied question—should we keep grinding on the literary front or stuff our pie holes?—was a no-brainer.

"Bring it," I said.

Retreating to his pantry, he emerged with a 14-inch-tall ceramic crock. Its top was a circular trench filled with water. The heavy lid's rim sat in this trench, forming an airtight seal.

He removed the lid, pulled two C-shaped ceramic stones from the interior, and then spooned a generous portion of light-green cabbage for me and one for himself.

"When I was a kid growing up in Philadelphia, the German delis had sauerkraut just like this, actively fermenting in huge barrels," he said, stabbing his portion with a fork.

Yeah, whatev, I thought. I'd had plenty of canned sauerkraut as a kid. Limp, vinegary, and salty as squid tears. However…

When I took a bite, I knew that I should have trusted the good doctor. Revelation! Teutonic redemption! Crunchy! Piquant! With just enough salt to make it sing!

Gott im Himmel, that's good sauerkraut!

It was a life-changing moment. Shortly afterward, my wife, Laurie, and I bought a fermenting crock and began chucking all manner of shredded vegetation inside.

While we've tried Korean kimchi and various other fermented dishes, we keep returning to making plain sauerkraut.

It's delicious and nutritious—a rich source of B-complex, C, and K vitamins; calcium and magnesium; and dietary fiber.

But most importantly, raw sauerkraut is a rich source of live lactobacilli, the organisms that impart its characteristic sour flavor. Eating it supports the growth of healthy gut flora—which is, in turn, increasingly understood to be the foundation of robust physical and even mental health.

In fact, several studies link frequent raw sauerkraut consumption to lowered cancer risk.

So…you can buy sauerkraut with live cultures, but at north of $7 a pound, it's no bargain.

Fortunately, making it at home is simplicity itself.

1. Shred two heads of fresh cabbage either with a sharp knife or food processor. Mix in a large bowl with roughly 3 tablespoons of salt. Pack the salted shreds in the crock. Press hard with your fist.

2. Place the two half-circle-shaped ceramic weights (these come with fermenting crocks; a heavy plate will also work) on top of the cabbage.

3. Fill the crock's rim-trough with water and put on the lid. This forms a one-way seal. Carbon dioxide from the fermenting process can bubble out, but fresh air—which may foster mold growth—can't get in.

4. If visible brine does not form naturally within 24 hours, add salted water—roughly 1 teaspoon of salt per cup—until the weights are barely covered.

Now comes the hard part—patience!

Good sauerkraut takes time. At our typical kitchen temperature of about 74 degrees, it's tasty at three weeks, but perfect at four and good for at least six.

Once it tastes right, it can go into fridge, covered, for several weeks more. And don't forget to drink the juice, which offers many of the same

therapeutic effects as the fermented cabbage itself.

I hope you enjoy your sauerkraut journey as much as Laurie and I have. To this day, we offer enduring thanks to our friend Andrew Weil for showing us the way.

HOLY BASIL

- Tablespoon of dried holy basil leaves (commonly available at Indian grocery stores)
- Teaspoon of coconut oil
- 8 ounces of water.

Bring all three ingredients to a simmer for five minutes, cover, and let sit for another five. Strain out the leaves and drink.

Turbocharge Your Coffee

Popular in Silicon Valley Tech Circles, Buttered Coffee Has Now Gone Mainstream

Buttered coffee went mainstream last year thanks to Dave Asprey, a technology entrepreneur who vigorously promotes it on the Internet.

Asprey's version is called "Bulletproof Coffee." He developed it after drinking a cup of creamy yak-butter tea while trekking in the Himalayas and having found the beverage "rejuvenating." That tea gives Sherpas their legendary endurance at high altitudes.

After losing 100 pounds on a high-fat, low-carb diet, Asprey adapted the Tibetans' tea to Western tastes.

His Bulletproof Coffee consists of unsalted, grass-fed butter; a fat Asprey calls MCT oil (which appears to be concentrated medium-chain triglycerides from coconut oil); and his branded "Upgraded" coffee that he contends is relatively free of fungus-based toxins.

In my view, an occasional coffee mixed with healthy saturated fat is a fine idea, but Asprey's proprietary ingredient-intensive version is needlessly complex and expensive.

I find Asprey's warning regarding the high fungus-based toxin content of most commercially available coffees dubious, as coffee producers generally have sophisticated methods of controlling these. I'm also underwhelmed by his claims for MCT oil. Virgin coconut oil, available at any natural foods store, seems likely to have comparable benefits for less cost.

Asprey also specifies whirring the hot concoction in a blender, which

has two drawbacks — it requires washing the blender jug after each preparation, and I generally dislike pouring hot liquids into plastic containers, as this can release toxins.

But I've experimented with buttered coffee, and I like the results. When I start my day with it, I feel focused and energetic. It has a unique ability to keep hunger at bay for hours. You can find my version below, which is the essence of simplicity.

While I enjoy this creamy, rich treat, I don't recommend guzzling it by the quart, nor drinking it daily. Saturated fat has largely been vindicated as a potential heart-disease risk, but we didn't evolve to consume a great deal of it by itself — it typically is accompanied by other foods. So there may be untoward effects from overconsumption of straight fat.

But when I've got a full day ahead and/or need to drop a couple of pounds, this is the ticket — it drops appetite, promotes focus, and generally turbocharges my morning. And it's delicious!

Ingredients

Any quality coffee, made any way you prefer — drip, pour-over, French press, etc.

One tablespoon unsalted, quality butter such as Kerrygold.

One tablespoon extra-virgin coconut oil.

Directions

Pour hot coffee into a tall mug or glass, no more than halfway to avoid splashing during the mixing phase.

Add butter and coconut oil.

Mix in the mug with a handheld immersion blender — mine is from Cuisinart. You can easily rinse the blade under hot water and it's ready to go again.

The Wonders of Golden Milk

A Profoundly Warming, Nourishing, and Healing Beverage

Long-suffering readers know I am a great fan of turmeric, the deep-orange Indian spice shown in literally hundreds of studies to have healing effects.

Specifically, turmeric appears to help both prevent and relieve Alzheimer's disease, cardiovascular conditions, neurological disorders, weight loss, several cancers, and even psychological conditions such as depression. Most of these effects probably stem from its potent anti-inflammatory power.

Used in India as a food and medicine for over 4,000 years, turmeric and its active constituent curcumin remain relatively unknown in the U.S. Consequently, many Americans simply have no idea of how to successfully incorporate it into their daily diets.

So here's one of my favorite ways to do so — make golden milk!

Known in India as haldi ka doodh, there are endless variations on this remarkable beverage, but in my view, the best are made with coconut milk and oil.

The coconut products not only lend a creamy, satisfying mouthfeel but also bring the health benefits of lauric acid, a metabolism-boosting fat that your liver quickly and easily converts to energy.

GOLDEN PASTE

Step one is to make an emulsion — refrigerated, it's roughly the consistency of peanut butter — known as golden paste. It consists of:

1/2 cup turmeric powder
1 cup water, plus or minus as necessary
1/3 cup organic cold-pressed coconut oil
1½ teaspoons freshly ground black pepper.

(Use less pepper or omit if you can't tolerate it, but keep in mind that a black pepper renders the turmeric more absorbable.)

Put turmeric and water in a small saucepan, and stir over low heat until it thickens — roughly 10 minutes. Remove from heat, add pepper and oil, and whisk to thoroughly incorporate the oil. The mixture will keep at least two weeks in the refrigerator and several months in the freezer.

Golden paste makes an elegant condiment — you can place a dollop of it on your dinner plate and spread it on virtually any savory food. It can be stirred into soups, stews, and yogurt; blended in smoothies; or simply eaten as is, a teaspoon at a time.

And it forms the foundation of…

GOLDEN MILK

Warm a cup of organic cow, goat, coconut, or almond milk until it nearly

boils and then remove from heat and stir in one teaspoon of golden paste. Many recipes call for honey or maple syrup added at this point "to taste," but I would urge you to learn to enjoy the unsweetened earthiness of this profoundly warming, nourishing, and healing beverage.

Golden milk is good anytime, but I particularly like to sip a cup at night after dinner. Its deep, satisfying flavor helps one resist the urge to snack, and I find I sleep better as well.

Give golden milk a try. No other beverage has as much potential to help one live a long, healthy life.

Bringing the Spice of Life to Your Life

So…

The first question for anyone contemplating taking turmeric or curcumin is — which of the two is best?

This is a surprisingly difficult question to answer. One reason curcumin, rather than turmeric, is favored in scientific studies is that it's easier to standardize it and isolate its effects.

Whole herbs can vary in quality and concentration of various constituents. Scientists prefer isolated compounds like curcumin for the sake of simplicity.

But that doesn't mean isolated compounds are better. In fact, I tend to recommend turmeric over curcumin. Turmeric may have healthful constituents beyond curcumin that contribute to its anti-inflammatory power, as well as to its admirable safety record.

If you have a friend or loved one with diagnosed Alzheimer's disease, should he or she be taking turmeric? Probably, but chances are that person is already taking prescription medications known as cholinesterase inhibitors, such as galantamine, rivastigmine, or donepezil.

So to avoid any potential negative interaction, be sure to check with the patient's physician before you add daily turmeric (or turmeric with piperine — more on that below) to the regimen.

But as an Alzheimer's preventive — not to mention an overall health tonic — here are some ideas for adding turmeric to your diet:

A TASTY TEA

Turmeric tea, a favorite in Okinawa — home of the world's longest-lived citizens — is simple to make:

Boil 4 cups of water
Add 1 teaspoon of ground or finely chopped fresh turmeric
Reduce to a simmer for 10 minutes
Strain the tea through a fine sieve into a cup. Add honey and/or lemon to taste.

Beyond this, add a teaspoon of turmeric to every soup or stew you make. The deep, earthy flavor of the spice may soon become addictive — no dish seeming complete without it.

But if you dislike the flavor, any natural foods store has dozens of fluid extracts, tablets, or capsules that allow to you down it like any other supplement.

Look for dosages of 400–600 milligrams, and take two or three times a day.

I recommend versions that contain a compound called piperine — derived from black pepper — which has been shown to increase absorption.

But ask your doctor first if you are taking a prescription drug, as piperine may slow the drug's elimination.

Similarly, if you are cooking with turmeric, be sure to add a few shakes of black pepper to the dish.

Bottom line: Don't get hung up on which of the many ways to ingest turmeric is best. Experiment! Any way you consume it is better than missing out on the extraordinary healing power of this miraculous spice.

A Delicious Energy Booster

Do you crave for coffee first thing in the morning? I know the feeling. I love coffee and would have a cup every morning (after my chlorophyll shot). But for the past several months, I've switched my routine and started drinking this particular juice to boost my energy and iron level.

Beets are one of my favorite foods. Not only do they contain loads of iron and minerals, but they taste delicious. Live nutrients and enzymes in juices feed every cell in your body, and the fruit keeps your body well hydrated. This recipe will boost your energy level, and it's great as a midday snack!

Here's what you need:

2 large carrots
1/4 cup fresh blueberries
1/4 cup fresh blackberries
Handful of spinach

4 raw beets
1/2 a lime
Juice all ingredients together, dazzle with fresh mint, and enjoy!

HOMEMADE ENERGY DRINK

Monster, 5-Hour Energy, Red Bull — energy drinks have become staples in the American diet.

What most people don't know is that these are often terrible for your health. Full of sugar and other dangerous ingredients, the energy drinks you buy at 7-11 will have you buzzing for a few hours, only to come crashing to a halt.

I've had a friend hospitalized for drinking too many Monsters in one day. We were in college, and he was trying to make it through finals week. In the end, his liver and kidneys almost failed, and he was in the hospital for several days recovering.

To me, that's just not worth the pick-me-up.

That's why we've discovered a natural energy drink that you can make at home.

It will provide the same effects, without the dangerous results.

Blackstrap molasses and coconut milk will do the trick.

Blackstrap molasses has been gaining attention recently because it's so rich in nutrients. It's high in iron, calcium and magnesium, and is a great alternative sweetener.

It has a low glycemic index, so that the glucose and carbohydrates in the molasses are metabolized slowly. Magnesium and iron will also help give you an energy boost, particularly if you suffer from low iron levels. Because of this, blackstrap molasses gives you a slow, steady energy burst at the beginning of the day, which won't wear off by midmorning.

Combining blackstrap molasses with coconut water means that you get the added benefits of coconut as well! Coconut contains saturated fat, the structure of which allows it to be burned for energy rather than being stored as fat.

To concoct this drink, boil a cup of coconut water. Mix in 1–2 tablespoons of organic blackstrap molasses, and drink it once it's cooled. Add coconut milk just as you would add creamer to your coffee — it will add great taste! You can play around with this recipe, using more coconut milk than water if you'd prefer. It's also great iced!

Blackstrap molasses is said to be good for your hair, as well. It's full of

antioxidants like manganese, selenium and zinc, all of which contain anti-aging benefits and will lead to softer, smoother hair. It also is reported to help the body produce melanin, which provides hair color. Not only can blackstrap molasses give you youthful energy, it also might help to ward off greys!

IT'S PURCHASED BY MILLIONS OF SENIORS, BUT ENSURE SHOULD NOT BE A PART OF ANYONE'S DIET

In the commercial, an elderly but sprightly gent proclaims he is "terrible at golf," and proves it with a clumsy swing that misses the ball entirely.

Not to worry! He guzzles some Ensure, which, as an animation segment shows, recharges his aging muscles with glowing energy spheres.

Finally, he murders the ball. His admiring wife murmurs, "Good shot!"

Ensure rolled out in 1973 as a "medical nutrition product" for hospital patients. But ads like this one, featuring spry old duffers gaining superpowers, suggest that manufacturer Abbott Labs now wants every oldster on the planet to quaff this sugary, chalky goo.

My suggestion?

Don't.

Why eat food when you can guzzle sugared vita-goo?

Ensure epitomizes what's wrong with the American diet. Billed as healthful, it's essentially sugared water with protein isolated from milk and soy and cheap synthetic vitamins.

After water, its top ingredients are corn maltodextrin (a hyperprocessed starch made of chains of glucose — that is, sugar) and sugar, but apparently that doesn't make it sweet enough.

Because along with unspecified artificial flavors, it also contains sucralose, aka Splenda, a nasty artificial sweetener that's been linked to negative effects on gut flora.

> *Polysyllabic ingredients aren't necessarily bad. Even natural foods, broken down sufficiently, contain complexes of unpronounceable chemicals... but note the predominance of sugars (real and fake), soy and cheap polyunsaturated oils in this bottle. A soupçon of synthetic vitamins does not erase these sins.*

No one — especially no one who is sick — should consume this stuff.

A Better Way...

If you need one, it is possible to make a healthful, nutrient-dense bev-

erage. This can be useful for those who cannot eat solid food or who simply want a quick breakfast.

NATURAL FAT-RICH MEAL REPLACEMENT

- 1 avocado
- 1 ripe banana
- 4 raw eggs (if you prefer, you can use only the yolks, which are by far the most nutritious part)
- 1 cup whole milk or whole-milk yogurt

Combine in a blender and blend until just mixed and drink immediately.

As opposed to Ensure, which provides just 25 percent of the daily value for B vitamins and a mere six grams of fat, this delicious drink provides a respectable 31 grams of fat for steady energy without insulin spikes.

"Ensure epitomizes what's wrong with the American diet."

It's also a rich source of vitamins B6, B12 and D (over 40 percent of the daily value for all three) and provides abundant phosphorus and zinc.

Mix it up (literally) by substituting other fresh, nutrient-dense ingredients for the avocado, such as kale, and other fruit for the banana, such as fresh or frozen berries.

Just remember: The trick is to add the minimum quantity of sweet, carb-intensive ingredient (banana, apple, berries or other fruit) that you can to render the drink palatable.

Then dump your Ensure down the drain.

LOOK 10 YEARS YOUNGER — WITHOUT GOING UNDER THE KNIFE

Youth Killers

Aging is, of course, a natural part of each of our lives.

We all grow older and, as we do, our minds and bodies change.

It's inevitable for each and every one of us.

What's not inevitable, however, is how we age.

Growing older does not need to necessarily be a bad thing. It is possible to grow old and maintain your good health.

There are things that you can do to preserve your health. And there are also plenty of things that can kill it.

What you drink, what you eat, how you exercise, and countless other elements of your life can impact the aging process.

This first chapter focuses on several "youth killers." We'll identify the root of several causes of aging and health decline, and show you just how to fight them.

THE GREEK SECRET TO STAYING YOUNG

Advanced age is associated with increased inflammatory cytokine production. This causes the body to have a systemic inflammatory response which can become dangerous — a precursor to many diseases of aging.

A study done at the University of Kentucky observed old and young horses to track their cytokine production. It was found that old horses

have increased inflammatory cytokine production, which was exacerbated in those horses that were obese.

They determined that age-related obesity could play a role in the inflammatory cytokine production getting out of control.

Cytokines have a similar effect in humans. As we age, our production of inflammatory cytokines increases, causing a host of issues. These include arthritis, obesity, hypertension and Type 2 diabetes.

Inflammation is the source of these diseases, and countless others.

So what's the solution?

Let's look to Greece, home of some of the most impressive longevity in the world. There, people live to the age of 90 almost three times more often than Americans. They also have startlingly low rates of Alzheimer's and dementia.

In Greece, people eat an average of 58 pounds of fish every single year.

Fish oil has long been heralded for its health benefits, mostly stemming from its high content of omega-3 fatty acids.

Fish oil has been shown to fight chronic inflammation. This power has become more relevant in recent years, as scientists find more evidence to show that chronic inflammation plays a huge role in the diseases of aging.

Scientists at the University of San Diego published a study revealing that not only do high levels of omega-3's combat acute inflammation, but also resolve it as soon as it is triggered.

Now, acute inflammation can be a good thing, essential for healing. However, once inflammation become chronic, it becomes out of control and can lower the level of pro-resolution molecules in the body.

In particular, omega-3's can help fight metabolic syndrome, cardiovascular disease, cancer, cognitive issues and asthma.

Try adding healthy, omega-3-packed fish into your diet. Sardines, tuna, mackerel and wild caught salmon (never farm raised!) all have great levels.

Taking fish oil pills, or eating other foods high in omega-3's, can also help fight the symptoms of inflammation as you age.

THE "HEALTHY" AGE ACCELERATORS

To be fair, Americans seem to be getting more mindful about their health in recent years.

Grocery stores, restaurants and even fast food chains have started offering more healthy options. More people have begun hopping on various

diet trends — organic, paleo, vegan, vegetarian… the list goes on and on.

Unfortunately, not all of these trends are as healthy as they claim.

In fact, some of the "healthy" options being presented carry health risks.

One particular "health food" has been associated with accelerated brain aging, a more pronounced loss of cognitive function, and an older appearance.

The culprit? Soy protein — just like that found in tofu.

According to a study done by Dr. Lon White of the Hawaii Center for Health Research, "those who ate a lot of tofu, by the time they were 75 or 80, looked five years older." They also experienced accelerated brain aging and a loss of cognitive function.

Patients were becoming physically and mentally older as a result of the foods they thought were good for them!

Irina Ermakova, a leading scientist at the Institute of Higher Nervous Activity and Neurophysiology of the Russian Academy of Sciences, performed a study to see whether or not genetically modified soy would affect the offspring of rats.

She fed one group of mothers genetically modified soy, and kept it out of the other group's diet. When the rats gave birth, those babies whose mothers had soy in their diet were significantly smaller — appearing almost malnourished. Then, within three weeks of birth, 25 out of the 45 rats from the GM soy group died. In comparison, only 3 out of 33 from the non-soy group perished.

At this point, soy (both organic and genetically modified) has been shown to have negative effects in animal and human trials. The risk of looking older might be the least of your worries when it comes to this "healthy" snack.

Soy has terrible effects on your thyroid, which can lead to constipation, goiters and fatigue. It has been shown to delay menopause and mess with estrogen levels, particularly in young girls, and could put women at risk of breast cancer. It also can lower testosterone levels in men.

Soy crops up in unexpected places, such as vegetable oils and vegetable protein. It's important to avoid processed foods, which often contain soy by-products.

If you do want soy, limit yourself to traditional foods. Dr. Al Sears recommends tofu, miso, soy sauce and tempeh as safe alternatives. Just make sure you're not eating too much.

As for soy-based meat substitutes? Not a healthy alternative.

Avoiding soy means that you'll avoid the harmful aging effects that come with it, as well as the other side effects.

THE VEGETABLE KILLING OUR YOUTH

Controversial new research is revealing that one food could be connected to a shocking number of painful symptoms… causing extreme fatigue, mysterious rashes, aching limbs, stomach pains and more.

It's a food that acts like a sugar, spiking your insulin and energy levels, only to bring you crashing down.

Worst of all, it's considered a health food.

Some scientists are saying that the root of these health issues could be one of America's favorite vegetables: Corn!

All corn is problematic, really. Modern corn is all hybridized to be super-sweet and, like all carbs, spikes insulin and blood sugar. Human beings were never meant to eat this stuff in volume.

But the natural stuff should be fine, in moderation. The real problem is the GMO corn that's growing on farmland all across America.

For years, Caitlin Shetterly suffered from a host of crippling, inexplicable health problems. A brutal combination of headaches, rashes on her face, cold and cramped fingers, nausea, loss of appetite, insomnia and fatigue had all of her doctors stumped. She was just 36, and her symptoms were taking over her life.

In an article for *Elle* magazine, Caitlin explained in detail how her symptoms had a number of doctors stumped. She was diagnosed incorrectly countless times, and given prescriptions that didn't work. However, she eventually met Dr. Paris Mansmann, who suggested the symptoms could all be traced back to an allergic reaction to GMO corn.

Caitlin's body was having an allergic reaction which caused an overproduction of eosinophils, a type of white blood cell. As Dr. Mansmann explained,

> *Sometimes, however, an allergenic protein may prompt the immune system to release eosinophils. Then, it's as if a faucet gets turned on but can't be turned off — eosinophils just keep coming. Eventually they begin to leave the bloodstream and may infiltrate and damage the GI tract, esophagus, mucous membranes, lungs, the fascial system (the layer of connective tissue that surrounds the muscles, blood vessels, and nerves), and the skin — hence, the avalanche of symptoms.*

Caitlin set out on the very difficult task of removing all corn from her

diet. As she explains, at this point, it's not safe to assume that any corn — even that marked organic — is free of GMOs, as a result of natural cross-pollination.

Once she cut corn, she almost immediately started to see a difference in her health. Her symptoms all started to disappear.

As Caitlin explains, this was not an easy task. There's corn in a lot more things than most people would ever guess.

> *After all, how hard could it be to give up corn? The answer was: way harder than I imagined. Corn was my Waldo, popping up everywhere: in tea bags, juice, and cheese culture; it lined my "to go" coffee cups and plastic bags of frozen vegetables; it coated my store-bought apples and was on the bottom of restaurant pizza — almost everything my family used, no matter how piously natural and organic, had corn in it. It came under the guise of dozens of names like "xanthan gum," "natural flavors," "free-flowing agents," "vitamin E," "ascorbic acid," "citric acid," and "cellulose," to name a few. Almost daily, I'd find a new culprit. "Damn, this toothpaste is full of corn!" Then: "Wait, our dish soap is made from corn!" Or: "Oh my God, iodized salt has dextrose in it!"*
>
> *Not to mention the corn that is fed to animals whose meat and eggs I ate, whose milk I drank. I had to restrict my diet, Mansmann said, to vegetables, grains other than corn, grass-fed beef and dairy, wild fish, and game (if I was game).*

In the end, it was worth the effort. She's now able to live a healthy, free life and enjoy it.

For some people, Caitlin's story is extreme, overwhelming and even scary. But even the smallest health changes can make a big impact in our lives.

The debate over GMO corn, and all GMO foods, is a heated one. Some doctors and scientists, like Mansmann, insist that it's the root of disease and is having unpredictable effects on human health. Others, equally respected, insist that GMO foods are safe for human consumption.

Truthfully, there isn't much science either way. Monsanto's coiffers have effectively blocked too much research from being produced that comes out against GMO foods.

At the end of the day, it's also hard to determine exactly what is truly harmful about GMO corn. Is it the genetic modification itself? Or the fact that GMO corn is made, in essence, to be "Roundup ready" so that the

weedkiller won't harm the crop itself — and thus is drenched in herbicide?

Virtually ANY disease that's rampant today, especially autoimmune disease, likely has some connection to GMO corn, because we are eating so much of the stuff.

We're not willing to risk it. We'd recommend cutting GMO corn as completely as you can. To find out which GMOs are in which foods, go to **livingnongmo.org/learn/gmo-faq**.

DR. SEARS' FOUNTAIN OF YOUTH

Dr. Al Sears is a contributor to *Natural Health Response* and publishes his own newsletter, *Confidential Cures: Your Guide to Truth and Lies in Medicine from Around the World.*

Below he shares with us the dangers of some of the medications your doctor might be prescribing, as well as some healthy alternatives.

1. **Corticosteroids: Worse than arthritis pain.** Some of my least favorite drugs are corticosteroids, like the hydrocortisone cream your doctor might prescribe. This is a family of anti-inflammatory medicines many doctors use to treat arthritis, asthma or a skin rash.

These drugs turn off your body's natural repair and rejuvenation mechanisms, causing you to age more quickly. Fortunately, there are alternatives.

- For asthma: Try daily breathing exercises, massage therapy, and omega-3 fatty acids.

- For arthritis: Guggul and meadowsweet relieve osteoarthritis. Guggul is a Southeast Asian remedy which studies showed to be highly effective in reducing the symptoms of osteoarthritis. Meadowsweet is a great example of why no matter how many times we think we're smarter than nature, nature is better. Meadowsweet stores its active anti-inflammatories as inactive compounds. So when you ingest them, they go past your stomach intact. Then your liver safely converts them into the healing inflammation-dousing compounds that really work.

- For eczema or skin rash: My patients report great results with vitamin D oil while others prefer chamomile oil. Both are very effective.

2. **Beta blockers: Shortcut to old age.** Lopressor, Tenormin, Inderal, Corgard, or Normodyne and other beta-blockers age your heart more than almost any other drug. And in a recent study people who received beta blockers after having surgery that wasn't even heart-related were at higher risk of dying or having a stroke.

Here's what you need instead:

- CoQ10: This is my go-to supplement for my heart patients. It is the most important heart nutrient. Half of my patients have their blood pressure return to normal with CoQ10 alone. And it cures congestive heart failure.

- Garlic: This herb not only reduces triglycerides, which protect your heart, but it can also significantly reduce diastolic blood pressure.

- Hawthorn: This is the heart tonic of the ancients and it really works to relax the blood vessels.

3. **Bisphosphonates: Perfect way to create old brittle bones.** The bone drugs like Fosamax, Actonel and Reclast work by poisoning the cells that remove old bone. This disrupts natural bone remodeling so you get bones that are denser, but have weaker cells. If you take these drugs, your bones get more brittle and more prone to fracture, not stronger.

Before you take a bone drug, consider these natural alternatives that will harden your bones:

- Natural D: The D3 form of vitamin D is the hormone that directs bone building in your body. Vitamin D also increases telomerase, the enzyme that lengthens telomeres. Get 5,000 IU a day, preferably from direct sunlight.

- Vitamin K2: This forgotten vitamin aids with your bones' absorption of calcium to help make them stronger. The other benefit of vitamin K2 is that it rescues damaged mitochondria and cures mitochondrial dysfunction. This helps prevent telomere shortening. You can find K2 in a variety of different foods including egg yolks, organ meat, and organic milk. I recommend 90 mcg a day if you supplement.

DO YOU HAVE CHICKEN SKIN?

A client emailed me the other day and wanted to address her keratosis pilaris, aka "chicken skin," before her wedding day. With her strapless gown, the red swollen bumps would show on her arms. So I quickly came up with a few solutions.

Keratosis pilaris is a common and harmless condition. It usually appears on the arms, thighs, and buttocks. For some, it appears on the face. It is characterized by small pinkish bumps that feel like sandpaper. Sometimes, these are red, swollen, and itchy.

What causes this condition is the buildup of keratin (the protein that protects skin from infections), which can block the hair follicles. Those with dry skin are more prone to this, and during the winter, it can worsen.

So what are some quick at-home tips you can use to decrease the symptoms?

Here are a few recommendations.

- Limit the use of hot water. This causes bumps to be more inflamed
- Use unscented soap with natural oils to moisturize skin and prevent any negative reactions
- Don't scratch or rub the area
- Keep skin hydrated at all times. Since my client already uses the Black Currant Serum, I recommended that she use a few drops throughout the day. This serum alone made a big difference
- Add a humidifier and leave it on throughout the night.

Following the above recommendations, in just a few days, my client's skin improved dramatically and she was able to wear her beautiful strapless gown without stress.

BEAUTIFY YOUR SKIN FOR FALL

It's getting a bit chilly out, and this is the best time to tweak your skin care routine. The change of weather can have an effect on your skin. You might experience more dryness, skin tightness, flakiness (dead skin), and dry patches and some sensitivity. If you are, then follow these three simple yet effective tips to ensure your skin stays well balanced:

1. Cleanse your face at night with a creamy or low-foam cleanser. This is more hydrating and won't leave your skin dry and tight.

2. Hydrate with hyaluronic acid and rose oil. The skin produces less oil in the colder months, so it's important to replenish the moisture in your skin. For intense hydration, use a rose serum throughout the day.

3. Repair and revive your skin from overexposure to the sun. Vitamins A, C, and E are excellent in exfoliating dead skin and help in diminishing sun spots and pigmentation.

Yes, it's that simple!

IS IT TIME TO "RESET" YOUR SKIN?

If you have sensitive skin, it's not unusual to experience "unpredictable" skin conditions at one time or another.

Unpredictable skin is usually a reaction to many things — daily stress, sudden change of climate, change in diet, allergies, dehydration (internal and external), illnesses, and even hormonal changes.

If you can relate to this, here are the best things you can do to "reset" your skin:

1. Avoid using harsh irritants such as peels, fragrances, synthetics, alcohol, and toxic chemicals, as these will aggravate your skin even more. This is the time to repair, and so you should opt for calming ingredients, such as chamomile oil, carrot seed oil, and rose oil. Be certain that the products you're using don't have problematic ingredients, such as denatured alcohol, menthol, and parabens, as they are known to cause irritation.

2. Give your skin a break! Don't bombard your skin with too many products. Wash your face with a gentle cleanser (plant and nonalcohol based) and apply a natural face oil until your skin improves. This is a way to let your skin heal naturally and repair itself. Do use sunscreen daily, as this will protect your skin from the sun, which is known to cause irritation. Remember, simplicity is key.

3. Avoid triggers such as scrubbing, extreme cold or hot water, steaming or icing the face, loofahs, bar soaps, and astringents/toners that contain alcohol. These will trigger your skin to flare up even more.

THE ANTI-WRINKLE SECRET IN YOUR KITCHEN

My wife, Laurie, and I spent early September rampaging around eastern Oregon — rafting the Deschutes River, hiking up dry desert washes, and generally soaking up the atmosphere.

But… it's high, cloudless, and dry up there. The sun is strong.

The sky over Grass Valley, Oregon. Hawks don't provide much shade.

Did we worry that the sun's harsh rays would make us prematurely wrinkled?

Not a bit.

I've made the case before that prudent sun exposure is healthful. It stimulates the body to convert cholesterol into vitamin D3.

That vitamin, in turn, is vital for health, even lowering cancer risk.

Yet ultraviolet radiation from the sun is indeed a stressor.

So here's the important point.

Not all skin is the same. Some resists solar stress better than others.

The type of the food you eat has a large effect on your vulnerability to disease.

Turns out that this applies to premature skin wrinkling as well.

If you eat a great deal of polyunsaturated fat — the kind that stays liquid at room temperature, such as soy, sunflower, canola, or corn oil — solar radiation will do a number on your skin.

It will rapidly promote wrinkle formation.

If, however, you habitually eat highly saturated oil — the kind that stays solid at room temperature, such as coconut oil or butter — the result will be quite different.

This has been established in several studies. In one of the best, a 2010 Japanese survey including more than 700 women, those who consumed the most saturated fat developed significantly fewer wrinkles. Their skin was more elastic as well.

Why?

Consider a common culinary technique — oven-baking vegetables such as Brussels sprouts in oil on a cookie sheet.

If you try this with polyunsaturated soybean oil on your veggies, clean-up is a nightmare. The oil, oxidized by the oven's heat, forms a sticky, gummy residue on the cookie sheet, similar to varnish and about as difficult to scrape off.

Well, within the body, it does more or less the same thing — this highly unstable oil oxidizes and cross-links like varnish, reducing elasticity and

giving rise to wrinkles.

But cook those vegetables in precisely the same way with highly saturated coconut oil and the oil on the sheet rinses away with a quick spray of water.

Within the body, it also resists oxidation and cross-linking, promoting smoother skin.

Bottom line? Overexposure to the sun's ultraviolet light is definitely tough on skin (which is why I recommend measured, prudent exposure of roughly 30 minutes daily between 10 a.m. and 3 p.m. on the face and arms).

But our vulnerability to the skin damage that we typically blame on the sun is actually largely due to what we eat.

So avoid liquid oils derived from seeds because, like the toxins that they are, they drive inflammatory damage to organs and blood vessel linings.

Instead, eat healthy, saturated fats, including coconut oil, grass-fed butter, lard, and grass-fed beef tallow.

You'll be healthier in many ways — and younger-looking as well.

A FISHY KIND OF SUNSCREEN

Recently, astaxanthin has become regarded as a supernutrient. Derived from algae, or from sea creatures that eat that algae (salmon, shellfish, and krill), natural astaxanthin is one of the most powerful natural antioxidants available.

When taken as an oral supplement, research has shown that astaxanthin can provide cosmetic benefits for your skin, like diminishing wrinkles and making age spots smaller.

Since it becomes active in every layer of our skin, it also provides protection from UV damage!

For example, in 2010 the Japanese Society for Investigative Dermatology tested its effects on isolated human skin cells, and found that astaxanthin's profound antioxidant effects did protect against UVA effects. They predicted that it would "have a significant benefit on protecting against UVA-induced skin photoaging such as sagging and wrinkles."

Another human clinical study from Japan showed significant improvements in the appearance of crow's feet, age spots, elasticity, skin texture, and dry skin after just 8 weeks. These effects were seen in both men and women, who were each given 6 mg per day of an oral natural supplement and 2 ml per day of a topical application.

Other studies have shown that results can be seen with as little as 2mg per day.

In fact, a clinical trial of 21 people showed that they saw sun protection after just two weeks of taking 2 mg of astaxanthin daily. At the end of those two weeks, an average of 20% more sun exposure was required for the subjects to get sunburnt, or experience any redness at all.

Krill oil is a natural source of astaxanthin, and can be found very easily. Or, you can try taking astaxanthin on its own. As I mentioned, it's good to start around 2 mg, but increased doses are possible if you respond well to it.

LOOK YOUNGER INSTANTLY

Let's face it. We're all vain!

Everyone dreads looking older. Fortunes have been made off of surgeries, "miracle" creams, treatments, dyes and injections that promise to make you look younger.

In 2015 alone, Americans spent over $13.5 billion on cosmetic surgeries, with the most surgeries being performed on people 35–50 years old. We're obsessed with slowing the hands of time.

The truth is, living a healthy, natural lifestyle, like the one we've laid out for you today, will do more to help you look younger than any of those drastic procedures.

Here are a few extra tips to keep you looking great.

MIRANDA KERR'S BEAUTY SECRET

Miranda Kerr is one of the most famously beautiful women in the world.

The mother, in her 30's, still walks the Victoria's Secret runways every year, and travels the world for her job. She even recently launched her own natural skin care line, Kora Organics.

When asked for her secret to success, Miranda swears by a product we've already recommended.

Coconut oil.

In an interview with *Huffington Post*, Miranda raved about the oil's seemingly endless benefits.

"I cook with it, use it in my hair, it's great to remove makeup… really good for eye makeup if you've got sensitive eyes." Miranda told Post reporter Dana Oliver. "If you have a burn, like if you've burned yourself with a curling iron, you can put a bit of that on there to help. Sometimes I sleep

with coconut oil in my hair. The Clear Intense Hydration Mask, which has coconut oil in it, is good to put on the ends of your hair to smooth it and keep it nourished."

"I have an exfoliating cream in my line that is good for your face, but sometimes I like to mix it up and get sea salt and coconut oil or olive oil and scrub it all over my body. I feel like the sea salt is very invigorating and revitalizing."

There you have it, from the beauty queen herself. Add coconut oil into your beauty routine for younger, more nourished skin and hair.

15-MINUTE "TV READY" TRICK

Joan and Lydia Wilen are health researchers and authors of several books on home remedies, such as *Secret Food Cures* and *Treasury of Home Remedies & Natural Cures*. They've also worked in a lot of green rooms, making appearances on the *Today Show* and *CBS This Morning*.

In a recent interview with *Bottom Line*, they said,

> *We've learned some incredible secrets just watching TV pros put on their faces.*
>
> *Would you believe that you can transform an aging face in about 15 minutes, with nothing but chocolate and heavy cream?!*
>
> *It doesn't just cover up the wrinkles — it firms up your skin like a facelift! TV cameras are merciless, but this remedy even works for close-ups.*

The secret lies in the chocolate, which is rich in copper. This nutrient acts as a boost for skin-firming connective tissues.

Their recipe for a 15-minute home facial is:

- "Mix 1 heaping tablespoon of unsweetened cocoa powder with enough heavy cream to form a paste
- Apply it to your clean, dry skin and leave it on there for 15 minutes
- Rinse the mixture off with a washcloth and lukewarm water, then pat dry."

Fifteen minutes for glowing, youthful skin? We always knew chocolate was a superfood.

THE LOST ANTI-AGING PROTOCOL

If you've never heard of Dr. Weston A. Price, you're in for a treat.

You might call him the Indiana Jones of the quest for youth and longevity.

You see, Dr. Price spent decades traveling all over the world — from the most remote regions of South America to the Swiss Alps, from the frozen tundra of Alaska to the pristine mountain ranges of New Zealand.

The purpose of his expedition? To find the world's healthiest populations and learn what keeps them young and fit.

The Holy Grail of modern health.

And after 40 years, 15,000 photographs, 4,000 slides, umpteen filmstrips and studies on several thousand animals, Dr. Price's research paid off handsomely.

He discovered a super nutrient with the power to reverse a major form of aging in your most vital organ.

Your heart.

It's so powerful in fact, it could reduce your risk of dying — f*rom virtually any disease* — by nearly 40%.

Pretty amazing, right? But that's not all this nutrient can do.

Studies have also shown this miracle mineral is absolutely vital for maintaining a razor-sharp brain, wrinkle-free skin and a healthy metabolism.

It also has the power to reverse poor prostate health, according to a paper published in *Medical Hypotheses*.

That is the power of simple, natural nutrients in your life.

And it's just one of the components of the *Lost Anti-Aging Protocol,* an easy-to-follow plan consisting of four simple steps.

Four pieces of the anti-aging puzzle that, when put together, could be the answer to staying younger, longer.

And you're about to discover all the details.

You'll see the proof first-hand of how this lost *Anti-Aging Protocol* can change your life.

You'll get specific dosages and recommendations,

And discover how you can use them to turn back the clock — starting now.

It's no exaggeration that you are holding in your hands a veritable "fountain of youth." So let's get to it. The clock is ticking…

THE COMMON MINERAL DESTROYING YOUR ARTERIES

As shocking as it sounds, something you've been told is healthy could actually be the one thing causing your heart to age faster than normal.

It's true.

Disturbing research from Cedars-Sinai Medical Center reveals a common mineral you've been *convinced* is "healthy" can actually age your heart by 10 years.

And chances are, it's sitting in your medicine cabinet right now.

An imbalance of this mineral can dramatically age your heart, and your risk skyrockets as you get older.

One review of studies showed that if you're 81, and wondering if your arteries are stiff…you might as well flip a coin. Because there's a 42% chance your aortic valve is. That's incredible! A nearly 50% chance your arteries are already stiff, making your heart work harder.

The good news is, you can help maintain the flexibility of your arteries with one simple step.

This one step is actually combination of two natural nutrients that can support heart and artery health, keep bones strong and may improve your lifespan as well.

These ingredients work together to correct the mineral imbalance in your body. In a groundbreaking study by the Cardiovascular Research Institute, women were given just one of these two special nutrients for three years. As a result, their arterial stiffness ground to a halt — and even began to reverse itself!

Unfortunately, these nutrients are only found in a few select foods. Foods that are becoming increasingly rare in modern — and particularly American — diets.

TRY D3+K2 TODAY!

This could be your secret key to greater cardiovascular and bone health.

Gold Leaf Nutritonals' D3+K2 supplement is made with non-GMO ingredients and is soy-free.

To discover just how fast this essential vitamin combo can help you feel more secure in your heart and bone health, visit **goldleafnutritionals.com/products/d3k2**.

What are these two powerful nutrients?

Vitamin D3 and vitamin K2.

And the mineral threatening your heart health?

Calcium.

That's right, calcium.

To combat excess arterial calcium buildup, your body employs the Matrix GLA protein (or MGP) to move calcium back into your bones. But in order to do that, your body has to activate MGP…

Otherwise, that calcium won't budge.

A ONE-TWO NUTRIENT PUNCH

Vitamins D3 and K2 work together to keep calcium out of your arteries and in your bones where it belongs.

Vitamin K2 takes accomplishes the first part of this task, helping to remove calcium from your arteries.

Now the calcium has to get back into your bones where it belongs. For this to happen, your body needs another protein called osteocalcin to signal for your bones to absorb calcium and create new bone tissue.

That's where vitamin D3 comes into play. It is essential for creating osteocalcin.

That's why the combination of K2 and D3 is so important. Take a daily dose of **500 IU of vitamin D3** and **90 mcg of vitamin K2.**

You should note your K2 must be in something called the "MK-7" form because your body absorbs this form best.

It's important to ensure proper absorption because calcium regulation isn't all K2 does.

Vitamin K2 is a "must-have" to maintain a functioning brain. It can also work magic on your skin by preventing calcification of elastic fibers. So not only does K2 keep your arteries flexible, it can help keep your skin supple and wrinkle-free!

Vitamin D also has some amazing benefits, aside from making the necessary osteocalcin to get calcium back into your bones.

A one-and-a-half year study done in a VA Medical Center found that taking 1200 IU to 7100 IU of vitamin D daily helped improve pain, sleep, and flat out made the U.S. veterans feel better about their life.

And in vitamin D-deficient overweight men, taking 3,332 IUs per day for a year helped support healthy testosterone levels. In another study, 4,000 IUs helped men bounce back from tough exercise faster.

And higher levels of vitamin D in the body are associated with better breast health for women.

So be sure to stock up on a combo of D3 and the "MK-7" form of K2. This combination of vitamins is exactly what you need for your heart, skin and longevity.

ARE YOU LOSING YOUR MIND?

In recent years, scientists have identified two of the leading culprits that damage and kill nerve cells in the brain: plaques and tangles.

Plaques are clumps of beta-amyloid proteins that build up in the synapses — the connections between neurons — of the brain. When plaques form, they gum up neural circuitry and don't allow information to pass back and forth.

Buildup of these proteins takes years to accumulate, and by the time you start to notice your brainpower just isn't what it used to be, it's often too late.

But researchers at UCLA have discovered a fast-acting ingredient that could banish your brain fog in just one hour.

One hour.

Evidence from Asia shows that people between the ages of 60–93 who ate more of this ingredient scored better on mental tests.

And ancient cultures in India have been using it for thousands of years.

PROTECT YOUR BRAIN WITH THIS ANCIENT INDIAN HERB

This incredible ingredient is a spice called turmeric, an East Indian plant of the ginger family.

Turmeric has been cherished in Indian culture for thousands of years because of its healing properties. Now western scientists are catching on.

In the forward for the book *Turmeric: The Ayurvedic Spice of Life,* Dr. David Frawley began with this statement, "If I had only a single herb to depend upon for all possible health and dietary needs, I would without much hesitation choose the Indian spice turmeric."

As more research was done, scientists figured out the health-enhancing power of turmeric comes from the antioxidant compound it contains, called curcumin.

Curcumin helps reduce occasional inflammation in the body and promotes the repair of stem cells in the brain, preventing — and potentially reversing — age-related cognitive decline.

In one case study, after just 12 weeks of use, turmeric was able to relieve agitation, apathy, anxiety and irritability. One 83-year-old female patient in the study was able to return to beloved hobbies like knitting. After a year of taking turmeric, she could recognize her family and recall her late husband.

But not all curcumin is created equal.

Some forms of curcumin are more "bioavailable" to your brain and other critical bodily functions than others.

UCLA researchers discovered that if they coated individual curcumin molecules with phospholipids (fat molecules) in a very specific ratio, they would survive digestion and be able to pass through the blood-brain barrier.

This form of curcumin is referred to as optimized curcumin. The formula is so unique, it's been granted a patent (EP 1993365) technology.

You can incorporate this vibrant and aromatic spice into your diet by adding it to roasted vegetables or fixing up a delicious bowl of curry. Although, it can be difficult (and expensive) to get enough curcumin through diet alone, which is why you should take 400 mg of curcumin daily in supplement form.

Again, be sure to acquire optimized curcumin. It will take a load (and years) off your mind.

TRY BRAIN SUPPORT PLUS TODAY!

Try Brain Support Plus today for less than the cost of a bottle of water a day. Its special blend of optimized curcumin and bacopa extract will go to work right away to promote optimal brain function.

To discover just how amazing this unique, natural formula can help make you feel, and start giving your brain the support itneeds, go to **goldleafnutritionals.com/products/brain-support-plus.**

A FISHY WAY TO COMBAT AGING

We're currently suffering from an epidemic of unnatural accelerated aging.

The culprit? Inflammation.

Under normal circumstances, inflammation is part of your body's natural healing process. But this response is supposed to be temporary. Thanks to processed carbohydrates, pollution and perpetual stress, our bodies are

functioning in a state of constant inflammation.

Harvard Medical School researchers discovered your body has two miracle molecules for "cooling down" inflammation, and promoting healthy levels.

Because while too much inflammation can have disastrous effects on the body, as the *British Journal of Pharmacology* puts it, "Inflammation is an essential biological process for maintenance of homeostasis and recovery from tissue injury or foreign pathogens."

It's all about the balance.

But what are these two prodigious particles?

They are two specialized pro-resolving mediators — or SPMs for short — called protectins and resolvins.

And they're both found in omega-3s.

THE ALPHA OMEGA

Omega-3s help stop accelerated aging by quelling inflammation. Scientists at the University of San Diego published a study revealing that not only do high levels of omega-3's combat acute inflammation, they also resolve it as soon as it is triggered.

TRY ULTRAOMEGA™ TODAY!

This could be your secret key to greater heart and brain health.

UltraOmega is made with non-GMO ingredients and is 100% American made.

Visit **goldleafnutritionals.com/products/ultraomega** to discover just how UltraOmega can help you feel more secure in the health of your heart, brain and entire body.

And they help keep your muscles young. Just last year, a study on men and women aged 60–85 found "six months of [omega 3 supplementation — 2 grams daily] can prevent 2–3 years of the normal age-associated losses in muscle mass…and function."

Another function of omega-3s is increasing your levels of nitric oxide. Nitric oxide is considered by many scientists to be a stay-young miracle nutrient. The journal Science even named nitric oxide its "Molecule of the Year" for its ability to promote blood flow, support a healthy immune

system and help keep your brain firing on all cylinders.

Omega-3s can also turn back the clock on your skin, keep your bones young, your eyes young and help you lose weight.

To get enough omega-3s you would have to consume roughly three pounds of wild-caught fish per week. The best alternative is to take an omega-3 supplement. Be sure to look for supplements with high levels of EPA and DHA. Generally speaking, the more EPA and DHA in a supplement, the better. These are the "active ingredients" inside omega-3s that make them healthy.

Take a fish oil supplement with at least 1,000 mg of omega-3 fatty acids per day. And take it with a high-fat meal to aid absorption.

WHAT MY MOTHER ALWAYS SAID

As a child, the last thing I would do before brushing my teeth and climbing into bed was chew up a chalky Fred or Wilma and show my mother my empty mouth.

I've since graduated to vitamins not shaped like Hanna-Barbera cartoon characters, but every night I still hear my mother's voice echo in my mind, *"Did you take your vitamins?"*

Because vitamins are just as important for adults!

Adults may be finished growing, but as we age, our bodies don't absorb nutrients from food as efficiently. Adding a daily multivitamin to your routine will prevent — and correct — nutritional deficiencies.

It will also help you maintain muscle strength, boost your energy levels, improve your skin, prevent dental problems, and what's more, *it will halt the deterioration of your telomeres.*

Telomeres are compound structures at the ends of chromosomes that keep them from eroding as cells divide and replicate. Think of telomeres like the protective plastic cap on the ends of your shoelaces that keep your laces from fraying.

Each time a stem cell divides, its telomeres shorten. Shorter telomeres essentially lead to the decaying of the body — cardiovascular and pulmonary issues, memory loss, and the loss of muscle use and definition all can be attributed to shorter telomeres. They're the key to most diseases of aging.

By protecting the length of your telomeres, not only can you slow down the aging process, you can potentially reverse it.

Which is just another reason to take your vitamins.

It's an easy way to fill the nutrient gaps in your diet and get everything you need in one tab, making it easy to remember and stay on schedule.

FIND A QUALITY MULTIVITAMIN

The brand MegaFood, which you can find on Amazon in men's and women's formulas, only costs $0.50 per day.

But it could add many healthy years onto your life. For more information, go to **www.megafood.com**.

REGAIN YOUTH

Aging is inevitable. Aging poorly is not. Take control of your life and add years to it by incorporating the components of the Lost Anti-Aging Protocol into your diet. To recap:

- 500 IU of vitamin D3 and 90 mcg of vitamin K2 in MK-7 form
- 400 mg of optimized curcumin
- 1,000 mg of omega-3 fatty acids
- A quality multivitamin/multimineral

Of course, you should always talk with your doctor before adding any new supplements to your daily regimen.

But if you follow the protocol prescribed above, you will be well on your way to living a longer, more robust life.

Dental Myths Debunked

Though Widely Believed, These Seven Ideas About Oral Health are All False

Just as with any old wives' tales, there are many myths people believe about our teeth and oral health. Because oral health and your smile are so important, it's equally important to be informed about the facts before believing everything you hear. Let's debunk seven common dental myths that you've likely come across.

MYTH #1:

It Doesn't Matter if Baby Teeth Get Cavities

Even though baby teeth will fall out, if they aren't taken care of, they can end up with cavities or become infected, causing pain or infection for your child. Infection can then spread to other areas of the body, which is not pleasant. Baby teeth are paving the way for your child's permanent teeth, so be sure to introduce good habits and protect your baby's future oral health.

MYTH #2:

Sugar Causes Cavities

While it's not a good idea to eat much sugar, it's actually the *bacteria in your mouth* that cause cavities. When you eat carbohydrates (sugars) — for example, bread, rice, cereals, sweets, or potato — acid will attack your teeth. When given the chance to eat away at your teeth, bacteria will become unbalanced and release acid, which forms cavities. Having good oral hygiene and avoiding carbohydrates/sugars are ways to keep the environment in your mouth healthy.

MYTH #3:

Wisdom Teeth Should Be Removed to Prevent Crowding

Wisdom teeth don't always crowd people's teeth, so surgery isn't always necessary. If you have any pain or concerns about your wisdom teeth, see your dentist, but if they are not causing you problems and there is enough space in your mouth for them, then they may not need to be removed as a precaution.

MYTH #4:

If You're Pregnant, You Shouldn't Have Dental Treatments

While your dentist needs to know that you're pregnant before a treatment, there is absolutely no reason why you should skip seeing him or her. In fact, pregnancy is a high-risk time to develop dental problems such as gum inflammation. A checkup in early pregnancy is a good idea, and if you need any treatments, the best time to have any work done is during the first three–six months.

MYTH #5:

Adults Are Less Likely to Get Cavities Than Children

This is not true. In fact, as various medications can dry the mouth, many adults have less saliva, which leaves teeth more susceptible to cavities and decay. You are only less likely to get fewer cavities if you practice good oral hygiene and see your dentist regularly.

MYTH #6:

If My Gums Are Bleeding, It's Because of the Toothbrush/ Too Frequent or Rough Brushing

If your gums are bleeding, it's most likely due to the early stages of gum disease, which is called gingivitis. This usually occurs due to inadequate oral hygiene, so if you haven't been brushing regularly, you may find stepping up your routine to twice a day and flossing once a day will help. If you haven't been to the dentist recently, it might be a good time to go and get a professional check-up and clean.

MYTH #7:

If I Brush My Teeth Right Before Seeing the Dentist, He/ She Won't Know That I've Not Been Brushing Regularly

Oh, yes, they will!

DITCH DIABETES FOREVER WITH THESE SIMPLE STEPS

Today, diabetes affects 25.8 million people in the United States. That's three times the size of the population of Austria. And some 7 million people are estimated to have diabetes but aren't diagnosed, which amounts to twice the population of Ireland.

Many people don't realize just how serious diabetes can be. It's the leading cause of kidney failure and non-traumatic lower-limb amputations and new cases of blindness.

It's also a major cause of heart disease and stroke.

It's predicted that by 2050, 20% to 30% of the U.S. population will have diabetes. United healthcare estimates that over the next decade, the United States will spend a staggering $3.4 trillion in costs due to diabetes.

With all of the drugs out there, why aren't things getting better?

When the drug industry spends an outrageous 19 times more on self-promotion than on research, you know the answer. There's more money to be made in treating the illness than in curing it.

Just listen to what happened with the popular drug Avandia. This one's a doozy. This drug hit the market in 1999 after a multi-million dollar advertising campaign. Seven years later, it brought in $3.2 billion a year in revenue.

What are the chances some VIPs got million dollar bonuses over that? But then in 2009, sales dropped $1.2 billion after a study published in The New England Journal of Medicine linked Avandia to a 43 percent increased

risk of heart attack and a 64 percent higher risk of cardiovascular death. This should have shut the drug down right there, don't you agree?

It didn't! The FDA oversight board held a vote and decided to keep the drug on the market.

This isn't one isolated case. This is par for the course my friend.

By some estimations, drugs like Vioxx have been estimated to have killed thousands of unsuspecting patients. But check this out. It get even crazier…

The Mayo Clinic a few years back recommended a new software that shows a patient when he should begin taking Statin drugs to offset heart disease risks. Did you see that? It's a sneaky way of tricking unsuspecting patients into getting on Statin drugs. So now this patient is juggling two drug prescriptions. That's twice the revenue stream.

It's a crazy world we live in. Ok, but there's good news. Mother Nature again has cures waiting in the wings — even for diabetes. If only we'd just listen to her.

THE ESKIMO PARADOX

The Yukon-Kuskokwim Delta region of Alaska may be remote, but has one thing in common with the rest of the U.S. population. Residents have a similar obesity rate as other Americans, about 35%.

Despite that, they have somehow managed to maintain a much lower instance of adult-onset diabetes than that which usually goes hand in hand with obesity.

The difference? The population of Yup'ik Eskimos consumes about 20 times more omega-3s than the average American.

Seafood, particularly wild salmon, makes up a huge part of the diet for these Yup'ik Eskimos. Packed with healthy fats like omega-3 fatty acids, their diets allow them to remain relatively healthy despite being overweight.

A meta-analysis done by the Department of Internal Medicine found that daily fish oil supplementation helps to increase glycemic control for diabetics, which is an important step in improving their health.

In diabetic patients, its use had no adverse effects and also lowered triglyceride levels by 30%. The benefits of this "chinook oil," or fish oil, are undeniable, and are not just limited to those with diabetes. In an analysis of 20 studies, researchers found that eating one or two servings of fatty fish — such as salmon, herring, mackerel, or sardines — a week can reduce one's risk of dying from heart disease by 36%.

High levels of triglycerides, which fish oil can lower, also lead to stroke and heart disease. Because of this, fish oil is also good for your heart health. Over the long term, it can also increase HDL, or "good," cholesterol levels, which is another benefit.

Omega-3 fatty acids can reduce pain and inflammation, which makes fish oil a good treatment for a number of conditions from psoriasis to diabetes.

If you don't have a taste for salmon, or for the more regional delicacy of seal, you can easily increase your intake of omega-3s with fish oil supplements.

There are a ton of fish oil supplements available, and it can be easy to get overwhelmed.

Look for a product that has a high concentration of EPA and DHA per gram (50% or higher is ideal). Taking 1–2 grams of fish oil per day is sufficient for most people, although the aforementioned meta-analysis found that 3 grams were beneficial for those with diabetes. Also look for a company that has stringent procedures in place to keep the oil from becoming oxidized. If the company doesn't tell you how they prevent the oil from going rancid during the manufacturing process, look for another brand.

A DIABETIC'S WONDER TEA

This beverage is popular in South Africa since the **redbush tea tree** is native to the country. The tea is created by fermenting, or "oxidizing," the leaves. This fermented process gives the tea a pungent taste that is enjoyable to many. It even has antioxidants that assist with diabetes. Redbush tea has been shown to metabolize fats quicker in the body. Along with a well-balanced diet and some exercising, you can easily shed pounds off your body, reducing the chances of having diabetes as your body begins functioning better. For those with long-term diabetes, when taken as a supplement in controlled dosages, redbush tea was able to positively affect hypoglycemic levels. It can be taken orally through a supplement form and can help stabilize your sugar levels promptly.

Since we're talking about antioxidants, you should know there's another popular (and delicious) food chock full of the stuff that can also help you lose weight. Shockingly, it's butter. Avoid margarine or other alternative stuffed with chemicals. Make sure the butter you buy is made with milk from grass-fed cows and you should be alright.

THE CHINESE "BEAN CURE" YOU PROBABLY ALREADY EAT

The controversy surrounding the health benefits of soy has been debated for decades. The underlying fact is that soy does contain certain health benefits that are great for overall body function. Taking soy in moderation is suggestible, and can be especially beneficial if you're diabetic.

Soy products like tempeh and tofu are great options if you don't know where to start. Soy foods are low on the glycemic index and are excellent sources of fiber. These foods may improve insulin production in your body and regulate your blood sugar level. In addition, soy has been shown to help protect the kidney in diabetes patients.

Furthermore, soy is low in calories and has high nutritional value. When eaten in moderation along with other healthy foods, it can reduce the amount of fat, calories, and cholesterol you consume and help mitigate diabetes symptoms.

THE DIABETES CURE YOU CAN BUY AT WALMART

Diets rich in sugars not only could lead to Type II Diabetes, they could also promote the growth of certain tumors. People with diabetes could see a drastic improvement in their health by consuming a substance called **nicotinamide mononucleotide** (NMN, for short).

When your body digests and breaks down NMN, it enhances your hepatic insulin sensitivity. In other words, it helps regulates the spikes and drops of sugar in your body. Additionally, after you consume a large enough amount of NMN, your body will begin to restore nutrients that also assist with restoring gene expression.

If you've found it difficult in keeping your diabetes under control, seeking medical attention should be your first priority. Sudden drops or spikes in your blood sugar can be temporarily fixed with NMN until you can seek proper medical attention.

THE NEW EUROPEAN DIET PERFECT FOR DIABETICS

A new "craze" known as the **"Mediterranean Diet"** has hit the market. This diet is rich in fish, beans, fruits, vegetables, olive oil and nuts. It also limits how much dairy you should consume and allows moderate alcohol consumption. However, people don't complain because they're thankful for a diet that actually allows you to have a beer or a glass of wine every now and then.

When studying a random list of people aged 55 to 80 (the primary age range of diabetics) people who ate the Mediterranean diet were less likely to get diabetes. Taking a Mediterranean diet supplemented with olive oil reduced the risk of diabetes by 40%. Adding nuts to the diet had an 18% reduction.

Also, make sure the olive oil you're buying is pure. Read the fine print on the bottle and make sure the bottle was packaged in Italy and that it isn't mixed with other oils. These foods help stimulate insulin production and aid the pancreas by keeping levels from spiking or dropping drastically.

There's one type of drink you can get at the bar that might improve your chances against cancer. We're talking about scotch. Single malt, in fact, since it has high levels of ellagic acid, a powerful antioxidant against certain cancers. And don't feel guilty about having a couple of beers after work. A glass or two a day can flood your body with powerful antioxidants, aid in your digestion, and even decrease stress and strengthen your heart.

THE BEST EXERCISES TO FIGHT AGAINST DIABETES

Of all possible cures, exercise has the highest success rate of curing Type II diabetes and reducing the symptoms in Type I diabetes patients.

When you begin exercising, you immediately help your body process the glucose it needs and pump it straight into your bloodstream. Once you begin sweating, you are able to reduce blood glucose by excreting the insulin through your pores. When you exercise more, you are able to keep your insulin levels consistent. If your glucose levels spike, a quick run can help reduce it immediately.

Never forget to regulate your blood sugar with healthy foods and activity. The more you exercise, the more you'll have to consume certain sugars. Before beginning any new exercise regimen, make sure you talk to your doctor. Your physician will be able to provide you with all the necessary information to get your diabetes under control.

Consider purchasing a set of resistance bands and doing a variety of resistance based workouts. You can buy a set online for roughly $30.

BEST FOODS TO LOWER BLOOD SUGAR

Controlling your blood sugar levels is the best thing you can do to mitigate the negative effects and symptoms of diabetes. And the best way to do that is to be aware of the foods and substances you put in your body.

Here's a list of the best foods someone with diabetes could eat to maintain a healthy diet. Incorporate five of these foods into your diet for 6 weeks and your doctor will be amazed at the level of improvement you'll achieve.

Whole-Fat Dairy

Make sure you get three to five servings of whole fat dairy products like milk, yogurt and cheese. Trans-palmitoleic acid found in this type of food helps regulate the body's blood sugar.

Vinegar

Two to three tablespoons of vinegar before or with a meal can reduce sugar levels between 25–50%.

Chocolate

This should be great news to any chocolate lovers out there. Three ounces of dark chocolate can reduce insulin sensitivity in your body if consumed daily. This type of chocolate has been shown to accelerate the body's ability to process and metabolize glucose in the body.

Apples

Apples are known for having high levels of quercetin. The higher the levels of quercetin, the more potent the effects. Apples have shown to reduce the risk of diabetes by as much as 20%.

Garlic

Garlic helps regulate the body's insulin levels and helps prevent spikes or drops in your blood levels. Even better, garlic can help with low blood sugar by promoting insulin production. Two to three cloves a day is more than enough for the average person.

Green Tea

Regulating blood sugar has never been easier than with green tea. This tea has an abundance of antioxidants that assists with producing insulin, regulating it and helping the body metabolize glucose. Two to three cups daily will show the most beneficial results.

Cinnamon

Ingesting cinnamon has an abundance of positive health benefits for you. A daily diet with at least half a teaspoon of cinnamon can help lower sugar levels by as much as 8%.

Did you know the last place you want to look to help manage your diabetes is the FDA's official Food Pyramid. Why? They tell you to load up the base of your diet with grains, pastas and breads. These carbohydrates are just another way to introduce sugars into your system. The Food Pyramid looks more like a favor to special interest groups than it does sound nutritional advice.

ANOTHER BIBLICAL HEALTH CURE

Holy thorn is one of those plants you rarely hear about unless there is something wrong with your body. Native to China, you can now get this plant in over-the-counter supplements. Used as a traditional remedy in Chinese medicine for over 1,400 years, this product can aid with controlling glucose levels.

When consuming holy thorn extract, you'll begin to feel its effects immediately. The product helps stimulate your body's pancreas and will help keep blood sugar levels at normal levels. Furthermore, the plant is able to improve A1C levels, which help regulate insulin in your body. You can properly maintain your body with this supplement by reducing sugar spikes and increasing insulin sensitivity.

STOP SUGAR SPIKES IN THEIR TRACKS

You might have heard of chromium being used in cars and in construction projects. But did you know this metal is essential to maintaining a healthy diet. Also known as an "essential trace element," it provides diabetics with a wide number of benefits.

When consuming chromium picolinate orally, a person can quickly reduce their high blood sugar. This substance assists the body by reducing blood sugar, reducing insulin levels and even assisting with insulin production for some diabetics.

Additionally, this trace element is found in many diabetic medicines. When consumed, it helps reduce fat intake and can also help by preventing weight gain. In fact, this has been shown to help with weight loss.

THE CINNAMON AND HONEY BIBLE CURE

History is filled with major breakthroughs in medicine. Some of the best discoveries come from eastern medicines and remedies that use fewer chemicals and more organic substances. A recent breakthrough in major eastern medicine is the new "Bible Cure" for diabetes. This cure is a combination of **cinnamon** and **honey**.

Honey is beneficial for the body, especially when eaten in its raw form. It's a food that rarely spoils or rots. This allowed many people to store and use it later. In traditional eastern medicine, honey is an ideal supplement because of this particular benefit. When combined with cinnamon, it will help improve your body's overall health.

Cinnamon and honey act as a repellent for bad molecules and are filled with hundreds of live molecules that assist with the digestion process. When entering the body, the cinnamon and honey stick against the lining of the stomach and intestine. This helps reduce the amount of insulin absorbed into the bloodstream, preventing insulin spikes from occurring.

The benefits of cinnamon and honey are abundant. The more you consume, the better your health will be long-term. You can help control diabetes with this simple recipe. Combine one part honey, one part cinnamon, and ten parts water.

THE BEST DIABETIC SUPPLEMENTS TO TAKE

Diabetes hinders the way the body metabolizes glucose. While healthy eating and daily exercise is probably the best way to reduce sugar spikes and blood sugar drops, taking supplements can also help.

Listed below are supplements that will mitigate symptoms associated with diabetes by making your body more insulin-sensitive. Additionally, these supplements slow down your body's ability to absorb sugars and fats. Healthy levels of cholesterol and blood sugar give diabetics more energy, fewer sugar cravings and help with weight maintenance.

- Vitamin D3 — 1,000 to 2,000 IU with breakfast
- Cinnamon — 125 mg to 150mg
- Fish Oil — 1,000 to 2,000 mg.
- Magnesium — 100 mg to 200 mg.
- Chromium Polynicotinate — 100 to 300 mcg
- Multivitamin — As directed
- Green Tea Catechins — 25 to 50 mg

- Biotin — 1 to 2 mg.
- Alpha Lipoic Acid — 300 to 600 mg.
- PGX — 2.5g before every meal

Regardless of what natural remedy or cure you decide to try in your fight against diabetes, here are three simple tips that can help you: 1. Stop drinking sugary drinks and sodas. 2. Exercise daily. It might hurt in the beginning, but it's worth it in the end. 3. Watch your diet. Your body functions off the food you give it. Remember that every time you eat something unhealthy

The Best Way to Cure Diabetes, Boost Immunity, and Extend Life Span

It Costs Nothing... And Can Be Incorporated Into Your Lifestyle Starting Today

There are many routes to a long, healthy life.

Regular exercise, optimal sleep, daily socializing, prudent sun exposure… the contributors make up a sizable list.

But as I spend my days pitchforking through nutrition and medical articles, I am amazed at how the consensus is clear: One specific lifestyle habit really does appear to be more important than others.

It is intermittent fasting, or IF. This is an umbrella term that takes in consuming only water, or drastically reducing caloric intake for periods longer than is typical on a three-meals daily regimen.

This surprises many people, because the incessant drumbeat of modern culture is to keep eating. Fasting for health, which has a long, noble history, started to fall out of favor about 60 years ago — pretty much the same time that farming and grocery stores morphed into Big Food and medicine became an instrument of Big Pharma.

Big Food and Pharma lose if you eat less, even for a day or two.

But you win.

THE METABOLIC SECRET SAUCE

A study in the June 2015 issue of *Cell Stem Cell* suggests that fasting on water only for two–four days a month can "switch on" hematopoietic stem cells. These create the cells of both the blood and immune systems, ramping up immune response.

That matters because decreased immune system efficiency is a hallmark of the diseases of aging.

As Valter Longo, gerontologist at the University of Southern California, put it:

What we started noticing in both our human work and animal work is that the white blood cell count goes down with prolonged fasting. Then when you re-feed, the blood cells come back.

And the ones that come back work better than the damaged ones. Result: improved immune function.

While emphasizing that results are preliminary, a new review of studies on intermittent fasting that included Type 2 diabetes patients concluded that the research supports "the existence of a health benefit from fasting."

But even more dramatic was a U.K. study that showed slashing caloric intake can, quite simply, *cure Type 2 diabetes*. After researchers at Newcastle University put 11 Type 2 diabetics on a 600 calorie per day diet, in just a week, the fat around their livers dropped 30 percent.

More to the point, their blood sugar levels were normal. At the end of the eight-week trial, they were producing insulin again.

They were then advised to return to their normal diets but eat just two-thirds as much as they typically had.

All were able to stop diabetes medications.

Meanwhile, a team of U.K. researchers recently concluded that intermittent fasting reduces inflammation and insulin resistance and lowers blood pressure, heart rate, and cholesterol.

As for lifespan, animal studies have recorded increases of 30–40 percent, including one that found that feeding rats every other day extended their lives an astonishing *83 percent!*

The bad news, of course, is that water-only fasting, or consuming 600 calories daily for two months, is no fun. In fact, it can be dreadfully difficult, and even unsafe for some people.

The good news? There is an alternative.

EASIER THAN LONG-TERM STARVATION

Longo has pioneered what he calls the "fasting mimicking diet," or FMD. It appears to offer most of the benefits of tougher fasting regimes while being within the grasp of any moderately motivated person.

His research indicates that a five-day FMD twice a month *slashed risk factors and markers for aging, cardiovascular disease, and cancer, all with no*

major side effects.

Importantly, in his studies on mice and humans, both the control and fasting groups ate the same amount of calories over the course of the whole month. In other words, it appears that periodic fasting offers health benefits even if the rats, or humans, eat more calories than usual during non fasting periods.

Longo believes that following this diet even just twice a year — which he does himself — will also offer significant health benefits.

So what does the FMD look like in practice?

You can see sample daily meal plans below.

Challenging, sure, but far from impossible. And Longo emphasizes that while the calorie counts are not flexible, the food that can be eaten *is*.

"We don't want to change what people eat normally," Longo says. "We are not advertising restriction." Generally, he says, the key is eating for nutrient density, which means consuming more olive oil, nuts, fish, and especially vegetables.

"A glass of red wine or two is fine," he adds.

Bless you, Valter Longo.

The Fasting Mimicking Diet

Sample Meal Plan

DAY ONE:

FMD permitted calories: 1,090 max

Breakfast: Black or green tea; one boiled egg (78 calories); one slice whole wheat toast (68 calories)

Lunch: Black coffee or tea; small green salad with avocado, dressed with olive oil (300 calories)

Snack: Two almonds (28 calories)

Dinner: Large helping of mixed green vegetable soup with borlotti beans; slice of whole wheat bread (616 calories)

DAY TWO:

FMD permitted calories: 725 calories max

Breakfast: Black or green tea; one poached egg with a grilled tomato

(100 calories)

Lunch: Miso soup (21 cals)

Snack: Seven walnut halves (90 cals)

Dinner: Vegetable chili with kidney beans and two tsp sour cream (514 cals)

DAY THREE:

FMD permitted calories: 725 calories max

Breakfast: Black or green tea: one slice whole wheat toast with two tsp of cashew butter (150 calories)

Lunch: Espresso; smoked salmon (100g) with watercress (200 cals)

Snack: Blueberries (100g) (57 cals)

Dinner: Large portion vegetable soup (318 cals)

DAY FOUR:

FMD permitted calories: 725 calories max

Breakfast: Black or green tea; half an avocado on one slice of whole wheat toast (220 cals)

Lunch: Espresso; 250 ml glass of almond milk (60 cals)

Snack: Two squares 70 percent dark chocolate (110 cals)

Dinner: Large green salad with 100g prawns, dressed with olive oil and lemon juice (335 cals)

DAY FIVE:

FMD permitted calories: 725 calories max

Breakfast: Black or green tea; two boiled eggs (156 cals)

Lunch: Half an avocado on toast; miso soup (210 cals)

Snack: An apple (60 cals)

Dinner: Large portion of vegetable soup with 10g toasted pine nuts (299 cals)

Bottom line: "If you follow the FMD twice a year, as I do, and combine

it with general nutritional advice [such as eating for nutrient density]… it will make a tremendous difference to your longevity," Longo says.

My friends, this really is the holy grail of a long, healthy life. My wife and I eat less whenever we take an extended road trip — something we do about four times a year. Distracted by the sights, we find it easy — almost effortless — to eat minimally.

You'll not only live longer, but those years will be far more likely to be filled with vibrant health.

Rediscovering the Cure for Obesity and Diabetes

The Pioneering Doctor Whose 1950s Dietary Solution Could Have Saved the Lives of Millions

Dr. Andrew Weil is the world's most famous advocate for natural healing therapies; his books have sold over 10 million copies. We've been friends for 20 years, and we wrote two of those books together. I respect his views immensely.

So a couple of years ago, as we sipped sake in his British Columbia summer home, I was all ears as he began waxing nostalgic about 1950s American medicine.

"It was the golden age," said Weil, who is now 73 and vividly remembers the physicians he observed as a teen. "The odious term 'medical industry' hadn't been invented. Doctors made a comfortable living, but no one pulled down a king's ransom. Medicine was a calling, not a path to riches.

"And the pharma companies hadn't persuaded both physicians and patients that 'practicing medicine' and 'dispensing drugs' were the same thing."

It was, said Andy, a purer time.

True enough. My subsequent research has shown me one fascinating aspect of that purity: Medical research in the 1950s was typically sponsored by universities or physicians themselves, not pharma companies who push for pro-pill results.

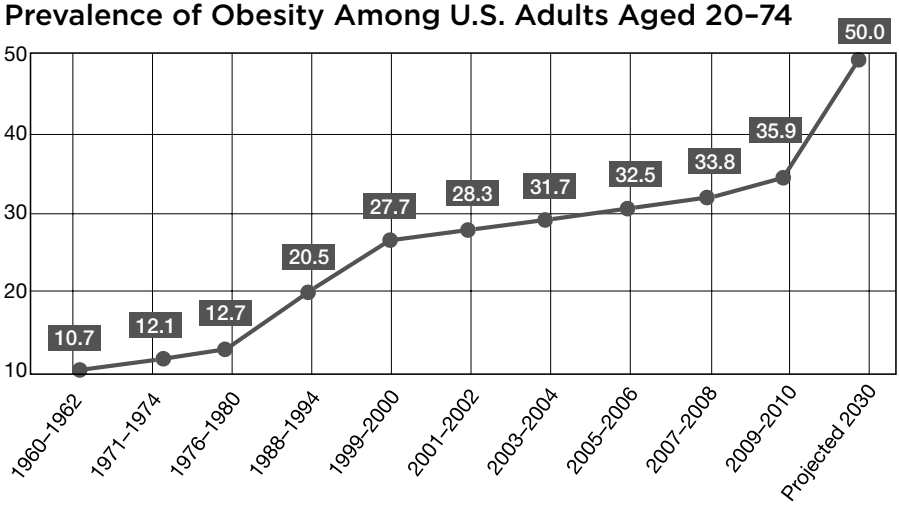
EISENHOWER-ERA RESEARCH WHICH JUST MIGHT SAVE YOUR LIFE

Here's my favorite example of that research from the 1950s — one that has huge implications for your health.

"Treating Overweight Patients" by George L. Thorpe, MD, was published in the Nov. 16, 1957, issue of The Journal of the American Medical Association— the most prestigious medical journal in the world.

It dealt with the then-rare but growing problem of obesity, which has grown far more dramatically since.

While Thorpe's article doesn't mention Type 2 diabetes by name, it also shows the path to "treating" that disease as well, since high levels of body fat and Type 2 diabetes are closely connected.



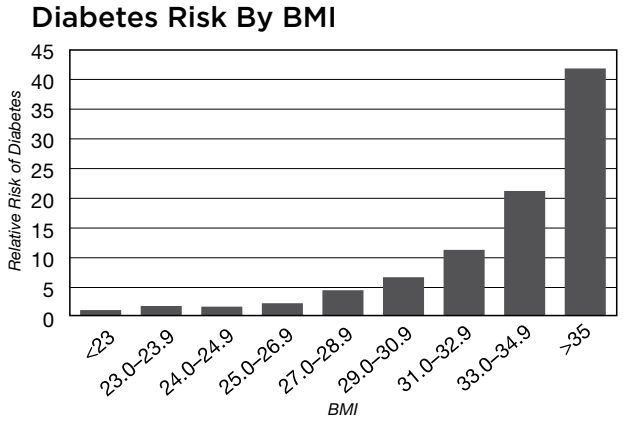
Obesity — once a minor problem — wasn't rigorously tracked until 1960. This chart shows we can safely assume obesity in the 1950s was rare. Note that the percentage of obese Americans begins rocketing skyward in the late 1970s, when the low-fat, high-carbohydrate federal recommendations went mainstream.

SO WHAT WAS DR. THORPE'S SOLUTION?

Here's the good doctor's clear-eyed, jargon-free prescription, laid out 59 years ago:

The simplest to prepare and most easily obtainable high-protein, high-fat, low-carbohydrate diet, and the one that will produce the most rapid loss of weight without hunger, weakness, lethargy, or constipation, is made up of meat, fat, and water.

As body mass index — a measure of obesity — rises, the risk of diabetes rises in lock step



The total quantity eaten need not be noted, but the ratio of three parts of lean to one part fat must be maintained. Usually within two or three days, the patient is found to be taking about 170 gm [six ounces] of lean meat and 57 gm [two ounces] of fat three times a day. Black coffee, clear tea, and water are unrestricted, and the salt intake is not reduced.

When the patient complains of monotony, certain fruits and vegetables are added for variety.

GOOD HEAVENS… ALL THAT MEAT!

In recent years, it has been definitively shown that the saturated fat in meat does not contribute to heart disease. Also, there are no necessary nutrients that can't be supplied by meat and vegetables (in other words, grains and milk don't supply any unique nutrients, just generally lower concentrations of what's found in meat and veggies).

But upon reading Dr. Thorpe's advice, you can just hear today's registered dietitians screaming from coast to coast, *"it's wrong to eat only meat and vegetables!"*

One must, they collectively shout, *"eat a semi-vegetarian, low-fat, carb-intensive diet like the one the American Diabetic Association recommends!"*

These diets were gaining traction in Thorpe's day. He was not impressed, offering this critique that time has shown to be exactly right:

A low-calorie, low-fat diet is usually unsuccessful due to the ease with which the carbohydrate present is converted into fat by the body coupled with the fact that the presence of carbohydrate… increases the fat-depositing activity of insulin.

Thorpe didn't arrive at his dietary recommendations in a vacuum. He leaned heavily on the experience of Dr. Alfred Pennington, whose early

1940s treatment of overweight executives of the DuPont Corp. was one of the first rigorous trials of a low-carb, high-fat diet.

The treated execs lost an average of 22 pounds each over roughly three months and reported that they felt well, were never hungry between meals, and enjoyed the meat-and-vegetable diet.

Thorpe was also an in-the-trenches physician who had lots of experience prescribing this diet to his overweight patients. He typically noted weight loss of:

approximately 1.5 pounds per week or six–eight pounds per month. On the strict meat, fat, and water diet, this loss is often increased 100%.

And once his patients had lost their excess pounds, he gave them this "maintenance diet" advice:

They are allowed meat with fat, vegetables, fruit without juices, and no added salt, but other seasoning to taste for variety; to follow with vegetables, including potatoes; and to complete their meal with fruit for dessert…

To illustrate the use of this rule, for dinner this evening order a rare steak, baked potato, chef's salad with Roquefort dressing, spinach, cauliflower or string beans, and black coffee. Eat the meat with the salad, follow with vegetables and potatoes to satisfaction; ignore the rolls and fancy dessert; drink water, black coffee, or plain tea.

A VOICE FROM THE PAST — A VISION FOR THE FUTURE

Dr. Thorpe was no lightweight. He was chair of the AMA's Section on General Practice — in other words, a prominent, respected voice in mid-century American medicine.

But even in the late 1950s, the moneyed interests were aligning against him; Pennington; and other low-carb pioneers, such as the brilliant British physiologist John Yudkin.

All of these sane, sensible voices were horrifying to the sugar, wheat, and corn conglomerates.

After all, carbohydrates are cheap to grow and process and are highly profitable. The fact that they are less healthful than nutrient-rich, carb-poor foods, such as meat and veggies, was exceptionally inconvenient.

By the late 1960s, the pro-carb brigade found its shill — a charismatic researcher named Ancel Keys, who would cherry-pick data to drive home the mistaken notion that dietary fat, not carbohydrate, was the culprit in weight gain, diabetes, and cardiovascular disease.

Time magazine put him on its cover in 1961. We've been getting fatter and sicker ever since.

BOTTOM LINE

The only addendum I might make to the brilliant work of Dr. Thorpe would be to add some veggies and some nutrient-rich organ meat, such as liver, right from the get-go for an overweight patient. A diet of only muscle meat and fat can eventually lead to nutrient deficiency (though scurvy, for example, generally takes at least three months of severe vitamin C deficiency to manifest).

Aside from that small quibble, this physician was dead-on. Had Thorpe, rather than Keys, been lionized by the press in the early 1960s, tens of millions of Americans would have been spared disease and early death.

Fortunately, it's still not too late for many of us to reap the benefit of his insights.

The Definitive Cure for Type 2 Diabetes

"Cure" is a powerful word. Not one I toss around lightly.

I don't pretend to offer cures for every person who has every condition known to humankind — and I think those who do so are irresponsible.

But Type 2 diabetes? The modern scourge? The condition that the Centers for Disease Control predicts will afflict one in three Americans by 2050?

The malady that roughly a third of *Natural Health Response* readers have told me is their chief health concern?

Yes… that condition is often curable. And the strategy I'll outline below really can, and has, cured it.

(Note: All of what I'll have to say here is about Type 2 diabetes, which accounts for roughly 90 percent of all diabetes cases in the U.S. Type 1 diabetes is a different disease with different, more complex causes, which I will not address in this article.)

Will this strategy cure everyone? No. Nothing cures everyone. Human physiology is too varied and complex to make that claim.

But I will predict that this strategy would knock back the incidence of Type 2 diabetes to the "background" level. In other words, I'm confident this measure, if widely implemented, would push this disease back to the levels we saw in the middle of the last century, when about 1 percent of

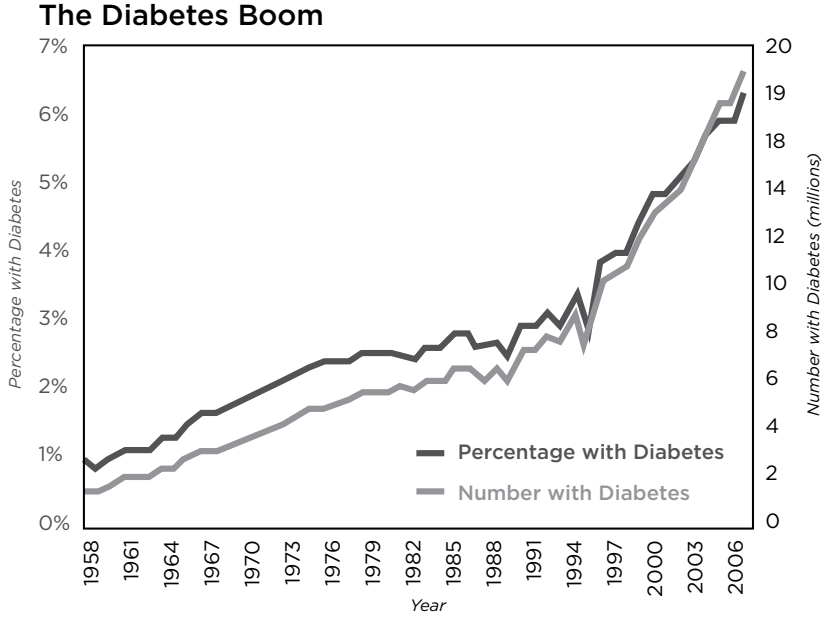
Americans had the condition.

So here it is…

EAT A LOW-CARBOHYDRATE DIET

To understand why this is the true solution, let's first examine why obesity and diabetes are going parabolic.

The American Diabetes Association (ADA) would have you believe it's largely due to eating too many calories, including calories from protein and fat.



Note that the incidence of Type 2 diabetes begins ratcheting skyward in 1988 — roughly the same time low-fat foods became ubiquitous in the American diet.

Specifically, its website says, "Being overweight does increase your risk for developing Type 2 diabetes, and a diet high in calories from any source contributes to weight gain."

This mealy-mouthed, weasel-worded statement sidesteps the central role that carbohydrates — not calories per se — play in the development of Type 2 diabetes.

Consider… in this, the age of obesity and diabetes, or what many now call "diabesity," here are the top four foods, ranked by daily caloric consumption, that modern Americans eat:

1. Grain-based desserts (cakes, cookies, doughnuts, pies, chips, cobblers and granola bars): 139 calories daily
2. Yeast breads: 129 calories daily
3. Chicken and chicken-mixed dishes: 121 calories daily
4. Soda, energy drinks and sports drinks: 114 calories daily

Note that all are carb-intensive. None, with the possible exception of the chicken, is a significant source of fat or protein. These are the types of food that are driving the diabesity epidemic.

THE REAL EXPERTS AGREE

Meanwhile, all that needs to be said about the amazing power of a low-carb diet's ability to reverse Type 2 diabetes is included in a definitive scientific paper called…

"Dietary Carbohydrate Restriction as the First Approach in Diabetes Management: Critical Review and Evidence Base."

It was published in January 2015 in the prestigious journal *Nutrition*.

Co-written by 20 of the top researchers in the field, it summarized dozens of high-quality studies showing that a low-carb diet *quickly and decisively lowers high blood sugar, which is the fundamental cause of Type 2 diabetes*.

Its conclusions are unequivocal:

- "Current knowledge dictates that carbohydrate restriction should be a default treatment for Type 2 diabetes"
- "The benefits of carbohydrate restriction in diabetes are immediate and well documented"
- "Dietary carbohydrate restriction reliably reduces high blood glucose, does not require weight loss (although is still best for weight loss) and leads to the reduction or elimination of medication."

Note the phrase "elimination of medication."

In other words — a cure.

UNIQUELY FRUSTRATED RESEARCHERS

I read many, many papers on nutrition and health. This one is unique in that one can actually *feel* the exasperation of the top-notch research team that came to the conclusion that carbohydrate restriction — not drugs, not even exercise — should be the primary intervention for Type 2 diabetes.

Believe me, for a scientific paper to contain a statement like the one below, from Eric Westman, MD, is unusual:

At the end of our clinic day, we go home thinking, 'The clinical improvements are so large and obvious, why don't other doctors understand?'

And here's the kicker. Dr. Westman, whose patients have had extraordinary success (I plan to visit his program's Durham, North Carolina, location and report back to you), notes that:

By reducing the carbohydrate in the diet, we have been able to taper patients off as much as 150 units of insulin per day in 8 days, with marked improvement in glycemic control — even normalization of glycemic parameters.

Dr. Westman is reluctant to say the word "cure," but that's exactly what he means by "normalization of glycemic parameters."

And to repeat, this was in just eight days.

WHAT ABOUT EXERCISE?

Exercise is vital. Exercise accelerates and solidifies the progress one can experience with a low-carb diet. But the research is clear — *the low-carb diet is primary, exercise secondary.*

The carbohydrate industry's big lie is arguing that if we all "just get moving," we can eat all of the grains and sugar we want.

While exercise can help somewhat against both obesity and diabetes, carbohydrate restriction should be the central strategy for both weight loss and diabetes prevention, alleviation and cure.

SO WHAT'S THE HOLDUP?

It infuriates me that the powers that be, especially the leaders of the American Diabetes Association, refuse to clearly and concisely tell people suffering with this debilitating, life-shortening condition that eating far *fewer carbohydrates — which means eating more protein and, especially, more fat — is the solution to their problem.*

So why doesn't the ADA tell you this? Here, direct from its own website, is a list of its top sponsors:

- AstraZeneca
- Boehringer Ingelheim Pharmaceuticals
- Eli Lilly
- GlaxoSmithKline
- Janssen Pharmaceuticals

- Johnson & Johnson Diabetes Solutions
- Merck
- Novo Nordisk
- Pfizer
- Sanofi.

That's right. The biggest drug companies in the world sponsor the ADA. So do you think they are eager to reveal the simple, safe method to cure Type 2 diabetes, thereby cratering their backers' profits?

BOTTOM LINE

My High-Fat, Real-Food Diet, is an example of a health-promoting low-carb diet, one based on extensive research.

Another great diet resource is pioneering low-carb physician **Dr. Andreas Eenfeldt's Diet Doctor website, www.dietdoctor.com/low-carb,** which walks you through the basics of what one should and should not eat.

For those who crave more structure, Dr. Westman's **HEALcare low-carbohydrate program (healclinics.com/**) offers both an on-site program (based in Durham, North Carolina) and an online diet program which have been clinically shown to alleviate and reverse Type 2 diabetes.

Whichever low-carb diet you choose to follow, do so confidently. Such diets are powerful preventatives for anyone at risk for Type 2 diabetes and powerful curatives for those who already have it.

And — above all — *ignore the ADA.*

3 Simple Steps To "Cure" Diabetes Without Drugs!

1. CUT THE CARBS

There are a number of natural steps that you can take to help ward off your chance of developing type 2 diabetes, or keep your symptoms at bay if you've already developed it.

However, there's one major lifestyle change that you'll have to make in order for any of them to truly work. And, oddly enough, an American scientist discovered it a century ago.

Let me introduce you to a man named Dr. Elliot Joslin. He founded Harvard's Joslin Center for Diabetes. In 1916, he wrote a book called *Joslin's Diabetes Mellitus,* one of the earliest texts on the diagnosis, symptoms, and

treatment of diabetes.

The text became something of a doctrine for medical practitioners in the early 20th century. In the 1921 edition of *The Principles and Practice of Medicine*, Dr. Joslin is given credit for the information on diabetes mellitus.

The very first line in that book regarding the treatment of diabetes reads, "In families with a marked predisposition to the disease the use of starchy and saccharine articles of diet should be restricted."

In other words, carbs and sugars should be strictly avoided if you're at risk for developing diabetes. The book goes on to recommend a high-meat diet, as well, advice that dates back even further to 1797.

Overall, according to researchers from Duke University, the recommended diet for diabetes patients in 1923 was "75% fat, 17% protein, 6% alcohol and only 2% carbohydrate".

One hundred years later, it seems that the Joslin Center has lost its way. The most recent book put out by their medical director recommended that carbs make up 40 percent of daily caloric intake, with a minimum of 130 grams of carbs every day.

After the discovery and implementation of insulin medications, experts started added carbs back into the diabetic diet. The reasoning was simple—if the medications can keep blood sugar under control, why not eat carbs and use the drugs to correct it?

Following that logic, if there's a fire hydrant outside of your house, why not set the house on fire? A "solution" is readily available, after all.

Now, I am not by any means trying to make the argument that all medical practices and treatments in 1916 were valid. In fact, some of them were downright horrifying.

But in this case, Dr. Joslin had it exactly right. What's also horrifying is that the professionals are now recommending a carb-filled diet to those suffering from diabetes, which is essentially poisoning them.

This is not a new idea.

In 1994, researchers at the University of Texas Southwestern Medical Center studied the effects of a high-carbohydrate diet (intaking 55% of food as carbs, 30% as fats) vs. a fairly high-fat diet (40% carbs, 45% fats). The participants were all diabetes patients who were not insulin dependent.

Although the group of patients on the lower-carb diet did still have carbs in their diet, they had much better results. Those patients eating a high-carb diet saw a deterioration of blood sugar control, a spike in

hyperinsulinemia (when there's too much insulin in the bloodstream), as well as higher triglyceride and LDL cholesterol levels, both of which are precursors to heart disease.

Cutting carbs has had historically proven success when it comes to diabetes treatment.

In 2005, researchers from the Duke University Medical Center and the Dept. of Veterans' Affairs Medical Center in Durham put 28 overweight, diabetic patients on a low-carb ketogenic diet for 16 weeks.

A ketogenic diet, if you're not familiar with it, is a diet that's high-fat, mid-protein, and low-carb. It essentially eliminates the carbs that are normally turned to glucose, and forces the body to burn fats instead of carbs—if not exclusively, at least to some degree. The liver begins to turn fat into ketone bodies, which serve as an energy source for the brain rather than glucose.

But I digress. Back to the study… 21 of 28 participants completed the study, which is a very high retention rate considering what a pain in the butt it is to cut carbs. (I'm not overlooking the fact that it's a challenge, trust me).

The results, however, spoke for themselves—and more than made up for the "inconvenience".

After 16 weeks:

- Medication was discontinued in 7 patients
- Medication use was reduced in 10 participants
- Medication use was unchanged in only 4
- The participants lost an average of over 19 pounds!
- Fasting serum triglyceride decreased 42% overall

Seems like reason enough to bring back Dr. Joslin's guidelines, doesn't it?

That's just the beginning. Recently, the NIH Action to Control Cardiovascular Risk in Diabetes had to shut down one branch of their study. One group of their participants was undergoing an intensive treatment, to try to lower their blood glucose below recommended levels.

They found that there was a spike in mortality in that group- 257 deaths, compared with 203 deaths in the standard treatment group.

Researchers at Duke University suggest that this is a result of trying to mask and medicate an issue without addressing the root cause- in this case, a high-carb diet was allowed to continue, and excessive medications and insulin were given to lower blood sugars.

As Dr. Eric Westman of Duke wrote in a 2008 study,

We believe that it is unlikely that the increased mortality was due to the tight glucose control but rather due to the particular method for trying to achieve it. When high carbohydrate diets are consumed and intensive medication therapy is used to 'cover the carbohydrate,' it is very difficult to achieve normal glycemic control *without hypoglycemic reactions.*

Dr. Westman and his colleague Dr. Mary Vernon set out to see whether a return to low carb dietary treatment would have a more positive effect on diabetes patients.

They found that the beneficial effects of a low carb diet in diabetes patients happen quickly. Drs. Westman and Vernon found that by reducing carbs in the diets of their patients, they were able to "taper patients off as much as 150 units of insulin per day in 8 days."

With such immediate and dramatically positive results, it's no wonder that they explain in the study— "At the end of our clinic day, we go home thinking, 'The clinical improvements are so large and obvious, why don't other doctors understand?'" This is perhaps the simplest and best way to put it.

2. GET ENOUGH SLEEP

An exciting new study published by the University of Chicago Medical Center in February, 2015 revealed a connection between sleep deprivation and diabetes.

According to the researchers,

Lack of sleep can elevate levels of free fatty acids in the blood, accompanied by temporary pre-diabetic conditions in healthy young men. Getting enough sleep could help counteract the current epidemics of diabetes and obesity.

In other words, not logging enough hours of sleep at night was enough to impact the insulin, glucose, and stress levels of otherwise healthy young men. They saw a 15–30 percent increase in early morning fatty acid levels, as well as an increase in insulin resistance that lasted up to 5 hours.

Overall, "the ability of available insulin to regulate blood glucose levels decreased by about 23 percent after a short sleep," suggesting what the authors note as an "insulin resistant state."

Getting enough sleep at night is something that's sorely lacking in many of our lives. However, it's one of the easiest things to correct— and does the body good in so many ways.

Increased blood sugar regulation and insulin sensitivity are just the tip of the iceberg. Sleep heals the body and helps to keep us healthy.

3. EXERCISE

I hate to break it to those of you who thought you'd get off easy, but exercise is a much bigger component of managing diabetes than most people realize.

Here, we actually will turn to the ADA for a moment—although their dietary guidelines for type 2 diabetics miss the mark by a mile, they do occasionally get it right.

In 2010, they released a joint position statement with the American College of Sports Medicine regarding the importance of exercise for those at risk for or diagnosed with type 2 diabetes.

They found that a combination of physical activity and modest weight loss can decrease the risk of developing type 2 diabetes by a whopping 58% in those who are already at high risk. With those odds, it's simply irresponsible not to incorporate exercise into your routine.

Let's take a look at some of the impact exercise can have on type 2 diabetes patients:

- improves blood glucose control
- positively affects lipids
- has a positive impact on blood pressure
- lowers the risk of cardiovascular events
- lowers the risk of mortality
- improves the quality of life
- can prevent or delay type 2 diabetes.

The bottom line is, most of the complications of type 2 diabetes, as well as the condition itself, can be avoided if you simply engage in the proper nutrition program, exercise, and work to maintain a healthy weight.

Medications and insulin use may very well be necessary, but they should be used as supplements to your overall lifestyle rather than the only solution.

Daniel's Diabetic Miracle

It's no secret that diabetes is one of the fastest-growing health crises in America.

According to the American Diabetes Association, 29.1 million American

have diabetes. That makes up 9.3 percent of the entire population. Of that number, only about 5 percent have Type 1 diabetes. The other 90–95 percent have Type 2 diabetes. (In this article, I'll use the term "diabetes" to refer to the Type 2 variety, which is much more within our control.)

What's more, 37 percent of American adults over the age of 20 have prediabetes, which means that their blood glucose levels put them at a higher risk of developing the disease.

These statistics are no laughing matter. Diabetes is a serious and possibly deadly disease. It contributes to the death of 234,051 Americans every single year, and costs the nation about $245 billion annually.

If you're diagnosed with diabetes, you're at a higher risk for heart disease and strokes, kidney failure, loss of eyesight, painful neuropathy, and loss of limbs.

The prevalence of Type 2 diabetes also goes hand in hand with obesity.

Here's what's frightening: The "experts," particularly the American Diabetes Association, seem to recommend diet and lifestyle trends that are the exact opposite of what people living with diabetes should be doing.

I'm here today to set the record straight, starting with one trick that you can use to help rid yourself of the complications of diabetes.

You see, I was online one day, feeling frustrated about the ever-growing cycle of nonsense being circulated when it comes to this issue.

That is, until I came across this quote from the Bible.

"I ate no delicacies, no meat or wine entered my mouth, nor did I anoint myself at all, for the full three weeks."

— Daniel 10:3

When I read it, I had to laugh. Because this idea is so close to one of the main tenets of health that I firmly believe in.

One that could help you live a life free from the painful injections, expensive pills, and irritating blood sugar tests that so often come along with diabetes.

Let me introduce you today to the trick I call "Daniel's Diabetic Miracle" — intermittent fasting.

HOW TO TIME YOUR MEALS

I'm sure you've heard the supposedly sage advice "Eat five or six small meals per day" for health and weight loss. As a young man in the 1970s, I never heard anyone suggest this, but these days, it's close to nutritional dogma. An online search of the phrase "eat many small meals" returns

tens of thousands of results

Maybe you've even passed this advice along yourself.

If so, consider yourself forgiven. Because "gems" like these are buried so deep in our psyches that we seldom think to question — much less reject — their basic premises.

But in this case, you might want to explore whether this whole "many small meals" thing is the real deal… or just common senselessness.

When people are told to "eat many small meals," what they hear is "eat all the time," an activity at which most Americans excel.

It's no coincidence that obesity and diabetes rates started ratcheting skyward in the 1980s, more or less in tandem with this widespread endorsement of more frequent meals. (The other major culprit was the government's nonsensical "low-fat, high-carb" dietary recommendation, which also leads to excessive hunger, chronic overeating, and out-of-control blood sugar levels.)

In my overseas travels, I rarely see people chowing down in their cars or in line for a movie or otherwise outside the traditional time and space boundaries of a meal. In the U.S., it seems that everyone continually eats everywhere.

Bad news: The theory of eating five or six meals per day for health and weight loss… is pure moonshine.

The good news (I like to end on a high note): A slight tweak to this theory could actually be one of the best-kept secrets for fat burning. More on that in a moment. First let's demolish the myth of noshing on nuggets of food throughout the day:

One study out of the Netherlands' Maastricht University Medical Center evaluated the differences in a low-frequency diet of three meals per day versus a high-frequency diet of 14 small meals per day.

Although the low-frequency diet did result in more drastic fluctuations in insulin levels (higher highs and lower lows), there was no difference in energy expenditure between the diets. This means that there was no weight-loss benefit to eating smaller, more frequent meals.

The researchers believe that this might be because "the insulin levels did not increase high enough to inhibit fat oxidation in the [high-frequency diet]." In other words, since their insulin and glucose were continuously at the same level, there was no signal to switch on the body's fat-burning machinery.

Furthermore, they found that the low-frequency diet led to lower blood

sugar levels, which led the researchers to suggest that "this can lead to a better body weight control on the long term."

A low-frequency diet of three meals per day led to greater feelings of satiety (in other words, fullness), meaning that the subjects were not hungry throughout the day and practiced better appetite control. These same results have been found in trials of young, healthy males as well as obese males when eating a high-protein diet.

And it gets worse for the whole "many meals" thing: A small study measured the blood glucose levels of subjects eating three high-carb meals in a day, six high-carb meals, or six high-protein meals. Glucose remained elevated longer throughout the day for those eating six high-carb meals.

Chronically high blood glucose could lead to insulin resistance, often a preliminary step toward Type 2 diabetes. If you get that, a few extra pounds around your belly will be the least of your worries.

Chronically high glucose levels will also help keep you addicted to Big Food's products, so don't expect a peep from these industrial carb pushers about decreasing how frequently you eat.

SO WHAT'S THE ANSWER?

The truth is we shouldn't take Daniel's advice literally. There is no reason that you should ever starve yourself for three weeks. Not even for three days.

The Department of Medicine at the University of Rochester School of Medicine and Dentistry looked at the differences between short and prolonged fasting. They found that resting metabolic rates fell an average of 8 percent after three days of fasting. This included a drop in the percent of carbohydrates and protein being metabolized. That means that the body was less capable when it came to burning fat and carbohydrates.

But… this was after three days.

A long-term fast can have negative effects on your metabolism. Studies have shown that its fat-burning potential spikes in the early stages of fasting and then evens out. Prolonging your starvation won't continue to spike your metabolic rate.

Short-term fasting, on the other hand, optimizes this process, causing energy expenditure to increase.

One easy strategy is called "alternate-day modified fasting." That simply means you limit your caloric intake every other day of the week. Then on the days you're not fasting, eat as much as you please.

This method is also more effective than regular dieting. One study from the Shahid Beheshti University of Medical Sciences in Tehran, Iran, studied 74 people, comparing a "calorie-shifting diet" (intermittent fasting) with a classic calorie-restrictive diet. They found that the calorie-shifting diet had greater improvement, resulting in a decrease in hunger and an increase in satisfaction after meals after the subjects dieted for four weeks.

The results of intermittent, or alternate-day, fasting can be incredible for anyone. But it has particular benefits for those suffering from Type 2 diabetes.

A scientific review in *The British Journal of Diabetes & Vascular Disease Suggests* that intermittent fasting helps people with diabetes and cardiovascular disease, while also assisting weight loss.

The review explains that "evidence from clinical trials shows that fasting can limit inflammation, improve levels of sugars and fats in circulation, and reduce blood pressure."

It goes on to say that "restricting calorie intake could possibly reverse Type 2 diabetes in some people." Results to this end include improved pancreatic function and less instance of insulin resistance.

You do need to keep in mind what you're eating, of course. Stick to a high-fat, moderate-protein, low-carb diet for the best results. Avoid sugars and carbs whenever possible. Otherwise, the sugars in the carbohydrates you consume will affect your insulin levels, negating the benefits of fasting.

OK, SO IT'S GOOD FOR FAT LOSS… BUT WHAT ABOUT OVERALL HEALTH?

Many people who read about intermittent fasting bring up an important question:

"Even if I can drop fat rapidly, isn't it bad for my health to go without food for so many hours per day?"

If you're concerned about that, then here's a word that I humbly suggest you add to your healthy-living vocabulary.

It's autophagy, pronounced aw-TAW-fug-ee.

Coined by Belgian biochemist and Nobel Prize winner Christian de Duve in 1963, it combines the Greek auto, signifying "self," and phagein, which means "to eat."

Understanding what it is, and how to optimize it, is absolutely vital.

Autophagy happens continually within all multicelled creatures. That includes you and me, a couple of 37 trillion-cell arrangements popularly known as human beings.

As we create new cells by the millions hourly, we must also carry out autophagy — disposal of the dying and dead cells via "self-eating."

During this process, lysosomes — tiny sphere-shaped structures inside each cell — spew out about 40 kinds of enzymes to break apart decaying proteins and other big molecules into smaller, simpler ones that can be used to build new cells.

Lysosomes also help to destroy disease-causing bacteria and viruses.

As with any bodily process, autophagy can be vigorous, average, or seriously screwed up. This matters. The efficiency of your autophagous machinery is vastly important to your health.

Robust autophagy leads to long life. Indeed, while you'll hear millions of claims that this diet or that behavior can extend life, optimal autophagy is one of the few scientifically confirmed processes that can do this.

In animal studies, life spans have been extended up to 65 percent.

Ramped-up autophagy has also been shown in studies to lower risk of cancer, insulin resistance, infection, heart disease, neurodegenerative diseases (such as Parkinson's and Alzheimer's), and inflammation in general.

A 2006 study by Johnson, Laub, and John states:

Since May 2003, we have experimented with alternate-day calorie restriction, one day consuming 20–50 percent of estimated daily caloric requirement and the next day ad lib [the technical term for "unrestricted"] eating, and have observed health benefits starting in as little as two weeks, in insulin resistance; asthma; seasonal allergies; infectious diseases of viral, bacterial, and fungal origin (viral URI, recurrent bacterial tonsillitis, chronic sinusitis, periodontal disease); autoimmune disorder (rheumatoid arthritis); osteoarthritis; symptoms due to CNS inflammatory lesions (Tourette's, Meniere's); cardiac arrhythmias (PVCs, atrial fibrillation); [and] menopause-related hot flashes.

So now you know that intermittent fasting is not only great for fat loss, but can also help you build robust health.

As pioneering natural-health physician John Tilden put it, "I must say in all seriousness that fasting, when combined with a properly selected diet, is the nearest approach to a 'cure-all' that is possible to conceive — profoundly simple and simply profound!"

PUTTING INTERMITTENT FASTING INTO ACTION

1. Get hungry now and then. "One well-recognized way of inducing autophagy is by food restriction, which upregulates autophagy

in many organs," concludes a 2010 study from the Scripps Research Institute in La Jolla, California.

In other words, practice intermittent fasting! Skip one meal a day or one day of solid food per week. Perhaps the simplest tactic is to eat only within a six-hour "window" from noon to 6 p.m. Do what works in your life. "Hungrying up" on a regular basis matters more than the precise form and timing.

Of the three steps I'm going to present here, this first step is the most effective. Yet mainstream health advice often advises just the opposite.

Now, I realize that disciplined eating is not easy. I like to chow down as much as, and perhaps more than, the next guy. But I've found it helps me to power through bouts of hunger to imagine leagues of industrious lysosomes busily power-washing accumulated junk out of my tissues.

I urge you to ignore the many voices in modern culture urging you to eat. If you listen to mainstream medicine, you will hear frequent warnings that hunger is dangerous, or leads to weight gain, or is always a symptom of an eating disorder.

Don't listen. Make hunger your friend. Regularly embracing even mild hunger can ultimately bring not only physical health, but also mental focus and improved mood… and, of course, more effective fat loss. It's worth the effort.

2. Eat a high-fat, moderate-protein, low-carbohydrate diet. As I've written previously, carbohydrates will spike your glucose levels and lead to problems like chronic inflammation and insulin resistance… yes, even the darling so-called "heart-healthy whole grains" we've been duped into making the foundation of our diets.

Avoid them at all costs. Follow a diet high in healthy fats for the best results.

Make sure to adjust your diet to contain more healthy fats before you engage in any kind of intermittent fasting. If you try to skip meals first, you run the risk of carb addiction getting the better of

you, which will make for an unpleasant experience. For this food timing trick to work, you need a satisfied appetite, and eating fat creates one.

3. Exercise. We all know exercise can make us healthy, but why? Its ability to boost autophagy appears to be the major reason. During exercise, virtually every kind of tissue experiences a boost in lysosome activity.

Combine regular exercise with this food timing trick and you just might experience the most rapid fat loss of your life.

Dial Back Diabetes

"One of the first duties of the physician is to educate the masses not to take medicine."

— William Osler, MD, author of The Principles and Practice of Medicine

I have always enjoyed exposing scams and rooting out insanity in the world of health. I've dedicated my entire career to these pursuits.

And there's nothing more insane than the official attitudes and policies regarding Type 2 diabetes treatment.

If you poke around the American Diabetes Association website, you'll find warning after warning to choose foods low in saturated fat, and lots of love for carbohydrates. So if you have diabetes, remember this info from the ADA:

- "Myth: Eating too much sugar causes diabetes.
- "Myth: If you have diabetes, you should only eat small amounts of starchy foods, such as bread, potatoes, and pasta.
- "Myth: People with diabetes can't eat sweets or chocolate."

Got that?

The problem is these aren't "myths." They represent the truth about what causes diabetes. So why is the ADA — the organization theoretically dedicated solely to the prevention and treatment of diabetes — saying otherwise?

And why does every other mainstream organization that deals with diabetes suggest — you guessed it — moderating carbs, and then go on and

on about how crucial it is to cut dietary fat?

I need to be perfectly plain. There is no credible evidence that fat consumption contributes in any significant way to diabetes. Studies that purport to show this are invariably "confounded." In other words, along with lowering fat consumption, the researchers conducting these studies changed many dietary and lifestyle variables at the same time. It's virtually impossible to perfectly filter out these confounding effects.

Worse, such studies are often observational — which means they happen outside of a lab and depend upon the subjects' ability to precisely remember and record what they ate, how much they exercised, etc. Such studies are notoriously unreliable.

On the flip side, evidence linking carbohydrate overconsumption to the development and worsening of diabetes is less likely to be compromised, coming as it does from every kind of scientific methodology: double-blind trials, animal models, large-scale cross-cultural studies… you name it.

It's worth noting that even researchers who contend that fat overconsumption fuels diabetes don't dispute that carbs are culprits as well — the contribution of carbohydrates to diabetes is simply incontrovertible.

Despite this, it was only this month that the journal Nutrition had the guts to publish a paper with the daring idea that restricting carbohydrates should be the "first approach" in diabetes management.

The absurdity makes the mind reel. Eating fat is not the cause of diabetes; it's the cure for it, and the fact that a high-fat, low-carb diet has not been the primary intervention for the last century is beyond crazy.

Today, it's my goal to set the record straight when it comes to diabetes, in the hopes that you will benefit from the truth.

CHAPTER 1: DIABETES 101

What is diabetes?

Diabetes (diabetes mellitus) is a disease in which glucose, or blood sugar, levels are abnormally high. This happens because the body does not produce enough insulin to break down glucose. There are several different reasons why this can occur.

There are two types of diabetes, and it is absolutely crucial to differentiate between the two.

Type 1 diabetes is a condition that occurs naturally. It is a disease in which the pancreas becomes unable to create insulin. Researchers believe that this is caused either by environmental factors or by a genetically inherited condition.

Whatever the reason, most people develop Type 1 diabetes early, before the age of 30 (earning it the name "juvenile onset" diabetes). Type 1 diabetes cases make up 5–10 percent of the incidence of diabetes worldwide. Almost all Type 1 diabetes patients are insulin-dependent, meaning that they cannot survive without supplementing with insulin, usually via frequent injections or a wearable pump.

Type 2 diabetes is an entirely different disease. Rather than the pancreas failing to create insulin, the body simply stops reacting to it. This means that the body resists processing it. I'll get more into the details on that later, but Type 2 diabetes is generally caused by improper diet or lack of exercise — it develops as a result of lifestyle, rather than environment or disease.

This is a vital distinction. I want to take a moment to focus on what truly causes Type 2 diabetes. It's become an epidemic in modern America. The Centers for Disease Control (CDC) released a 2014 report that 29.1 million people in the United States have diabetes. That's an astounding 9.3 percent of the population.

With almost one in 10 Americans living with Type 2 diabetes, it's become the norm for many of us. However, this was not always a case.

Let's take a look at the incidence of Type 2 diabetes in the U.S. over time…

As a nation, we've escalated from fewer than 6 million people suffering from diabetes in 1980 to 29.1 million people today. That's an astounding and frightening statistic.

HOW DID THIS HAPPEN?

Well, to start, let's take a look at the comparative graph below, looking at both diabetes and obesity rates in the U.K.

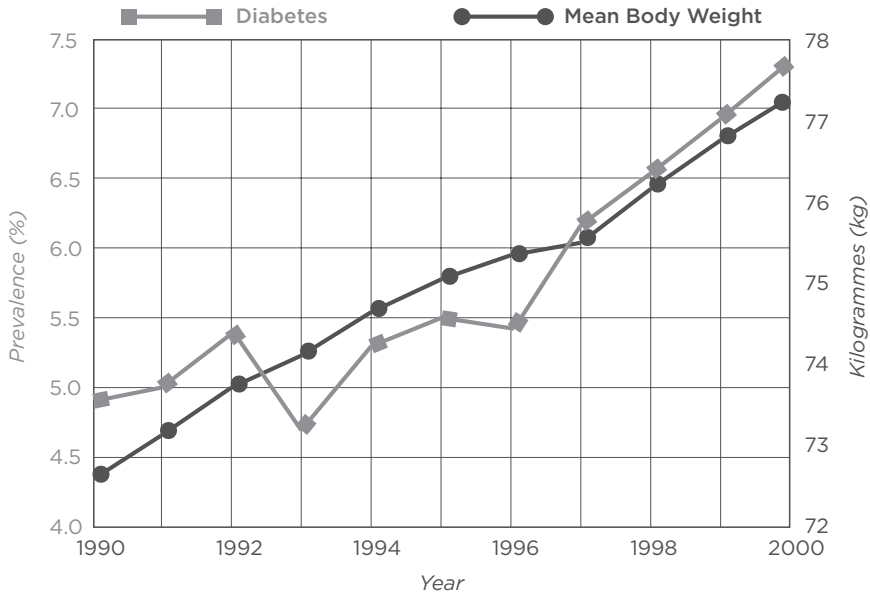
Notice anything happening there?

There is a huge correlation between obesity and Type 2 diabetes. This isn't just a coincidence. It's a direct cause-and-effect relationship.

Type 2 diabetes leads to a long list of associated diseases, many of them fatal, and many of them truly horrific, slow, painful ways to die.

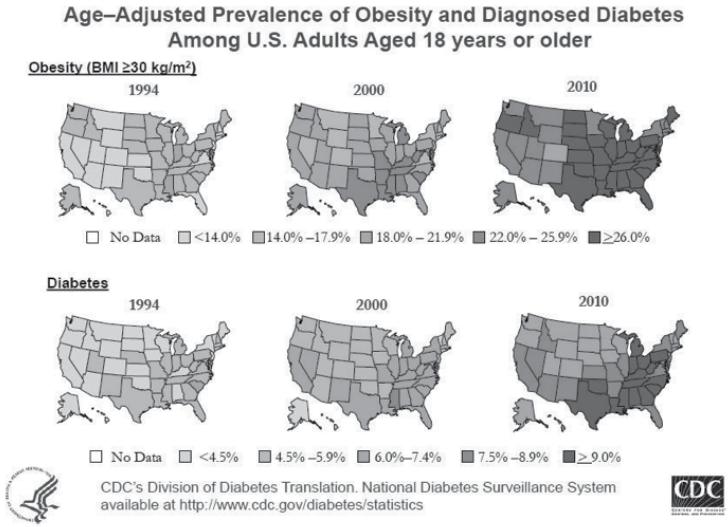
Type 2 diabetes puts you at risk of death from amputation, kidney, and liver failure, as well as cardiovascular disease.

Other less deadly but extremely painful secondary conditions include severe nerve damage and pain, skin complications such as infection, numbness in the extremities, and blindness.



We as a nation need to learn to take back control of our health. Just take a look at how rapidly the obesity and diabetes epidemics are overtaking us in the United States:

The rapid spread of these conditions is alarming. Both Florida and Virginia went from obesity rates of under 14 percent in 1994 to over 26 percent in 2010. That's not even a 20-year time frame!



HOW DID WE GET HERE?

Now that you've seen the numbers, let's dive into what actually causes Type 2 diabetes.

In a way, it all starts with carbohydrates. Whenever you eat a type of carb, it's eventually converted to glucose in the body. Glucose is a simple sugar that, in appropriate amounts, is largely used up as it fuels our daily activity.

However, too much glucose in the blood is toxic.

That's where insulin comes into play. Insulin is the "key" that allows glucose to get into our liver and muscle cells, where it's used as fuel.

Unfortunately, if those cells become full, they put up a "no vacancy" sign and start to resist insulin. The cells no longer accept more glucose, and it remains in the bloodstream.

(Think about filling your car up with gas — once the tank's full, it automatically stops letting more fuel in. Your cells have the same automatic wall when it comes to glucose.)

This sends the body into a panic — the pancreas pumps out more insulin, which creates even more insulin resistance in those overstuffed cells. Eventually, the insulin drives a process called lipogenesis — literally, fat-creating — as it turns to fat cells as a place to store the excess glucose, since it has nowhere else to go.

Now that the fat cells are storing this excess sugar (and remember, glucose is sugar — it's not eating high-fat foods that causes this problem), you begin to gain weight. Eventually, even your fat cells will develop insulin resistance, and more toxic glucose will remain in your bloodstream.

This is what leads to inflammation, as well as a rise in triglycerides and heart disease. It damages the nerves, damages the small blood vessels in organs like your kidneys and heart, and fosters atherosclerosis. It also often leads to severe dehydration, and in some cases, patients fall into a "diabetic coma."

It's a horrible cycle, really. Insulin resistance, and eventually Type 2 diabetes, often comes as a result of overeating, an unhealthy diet, and inactivity. Then once someone develops Type 2 diabetes, they often find it increasingly difficult to burn fat or lose weight.

They continue to gain weight, adding to the overproduction of insulin, and the cycle continues.

Eventually, if the condition is left untreated and continues to become more severe, the pancreas essentially burns out. It can no longer produce

insulin on its own, since it's been working overtime for so many years.

At that point, you become insulin dependent and require insulin injections to keep your blood sugar at a normal, nontoxic level.

There are many myths when it comes to diabetes. The ADA pushes many of them.

For example, there's a popular notion that red meat can increase your risk for Type 2 diabetes.

Red meat is demonized for a number of reasons not based in fact, and this falls into that category.

In 2011, a study published in *The American Journal of Clinical Nutrition* linked red meat consumption to Type 2 diabetes. They pulled the results from three huge studies — 37,083 men from the Health Professionals Follow-Up Study, 79,570 women from Nurses' Health Study I, and 87,504 from the Nurses' Health Study II.

From this population, they came to the conclusion that "red meat consumption, particularly processed red meat, is associated with an increased risk of T2D."

However, if you read the details, it's not quite so simple. "For both men and women, red meat intake was negatively associated with physical activity, but positively associated with BMI and smoking."

Uh-oh. Now it's not so simple. Those who eat red meat tend to have other "unhealthy habits." Since we've all been told that red meat is bad for so long, only people who are willing to ignore health advice of all kinds still eat it in quantity.

Now, the funny thing is that red meat actually isn't something you should avoid. The other unhealthy habits, on the other hand, are a real issue.

Those people who ate the most red meat also smoked, were overweight, were the least active,

drank the most alcohol, ate carbohydrates and processed foods… The list goes on and on.

Furthermore, most people believe diabetes is not curable. While Type 1 might not be "curable" in the traditional sense, there is no reason that the symptoms of Type 2 cannot be kept at bay indefinitely — in other words, functionally cured. A study from the Joslin Diabetes Center, an academic affiliate of Harvard, revealed that there are five stages of beta cell (a special type of cell found in the pancreas that creates insulin) dysfunction, and that movement from one stage to another — in either direction — is possible, refuting the assertion that diabetes cannot be cured.

But enough about facts and misconceptions. What can you do in your daily life to lower your risk of developing Type 2 diabetes? Or if you've already been diagnosed with it, what can you do to help keep it in check?

THE NO. 1 TRICK TO LOWER YOUR BLOOD SUGAR

It's not all bad news. There are a number of natural steps that you can take to help ward off your chance of developing Type 2 diabetes or keep your symptoms at bay if you've already developed it.

However, there's one major lifestyle change that you'll have to make in order for any of them to truly work. And oddly enough, an American scientist discovered it a century ago.

Let me introduce you to a man named Dr. Elliott Joslin. He founded Harvard's Joslin Diabetes Center. In 1916, he wrote a book called *Joslin's Diabetes Mellitus* one of the earliest texts on the diagnosis, symptoms, and treatment of diabetes.

The text became something of a doctrine for medical practitioners in the early 20th century. In the 1921 edition of *The Principles and Practice of Medicine,* Dr. Joslin is given credit for the information on diabetes mellitus.

The very first line in that book regarding the treatment of diabetes reads, "In families with a marked predisposition to the disease, the use of starchy and saccharine articles of diet should be restricted."

In other words, carbs and sugars should be strictly avoided if you're at risk for developing diabetes. The book goes on to recommend a high-meat diet as well, advice that dates back even further, to 1797.

Overall, according to researchers from Duke University, the recommended diet for diabetes patients in 1923 was "75 percent fat, 17 percent protein, 6 percent alcohol and only 2 percent carbohydrate."

One hundred years later, it seems that the Joslin Center has lost its way. The most recent book put out by their medical director recommended that carbs make up 40 percent of daily caloric intake, with a minimum of 130 grams of carbs every day.

After the discovery and implementation of insulin medications, experts started adding carbs back into the diabetic diet. The reasoning was simple — if the medications can keep blood sugar under control, why not eat carbs and use the drugs to correct it?

Following that logic, if there's a fire hydrant outside of your house, why not set the house on fire? A "solution" is readily available, after all.

Now, I am not by any means trying to make the argument that all medical practices and treatments in 1916 were valid. In fact, some of them were downright horrifying.

But Dr. Joslin had it exactly right. What's also horrifying is that the professionals are now recommending a carb-filled diet to those suffering from diabetes, which is essentially poisoning them.

This is not a new idea.

In 1994, researchers at the University of Texas Southwestern Medical Center studied the effects of a high-carbohydrate diet (55 percent carbs, 30 percent fats) versus a fairly high-fat diet (40 percent carbs, 45 percent fats). The participants were all diabetes patients who were not insulin dependent.

Although the group of patients on the lower-carb diet did still have carbs in their diet, they had much better results. Those patients eating a high-carb diet saw a deterioration of blood sugar control, a spike in hyperinsulinemia (when there's too much insulin in the bloodstream), as well as higher triglyceride and LDL cholesterol levels, both of which are precursors to heart disease.

Cutting carbs has had historically proven success when it comes to diabetes treatment.

In 2005, researchers from the Duke University Medical Center and the Department of Veterans Affairs Medical Center in Durham put 28 overweight, diabetic patients on a low-carb ketogenic diet for 16 weeks.

A ketogenic diet, if you're not familiar with it, is a diet that's high-fat, moderate-protein, and low-carb. It essentially eliminates the carbs that are normally turned to glucose and forces the body to burn fats instead of carbs. The liver begins to turn fat into ketone bodies, which serve as an energy source for the brain, rather than glucose.

But I digress. Back to the study… 21 of 28 participants completed the study, which is a very high retention rate considering what a pain in the butt it is to cut carbs. (I'm not overlooking the fact that it's a challenge, trust me.)

The results, however, spoke for themselves — and more than made up for the "inconvenience."

After 16 weeks:

- Medication was discontinued in seven patients
- Medication use was reduced in 10 participants
- Medication use was unchanged in only 4

- The participants lost an average of over 19 pounds!
- Fasting serum triglyceride decreased 42 percent overall.

Seems like reason enough to bring back Dr. Joslin's guidelines, doesn't it?

That's just the beginning. Recently, the NIH Action to Control Cardiovascular Risk in Diabetes had to shut down one branch of their study. One group of their participants was undergoing an intensive treatment to try to lower their blood glucose below recommended levels.

They found that there was a spike in mortality in that group — 257 deaths, compared with 203 deaths in the standard treatment group.

Researchers at Duke University suggest that this is a result of trying to mask and medicate an issue without addressing the root cause — in this case, a high-carb diet was allowed to continue, and excessive medications and insulin were given to lower blood sugars.

As Dr. Eric Westman of Duke wrote in a 2008 study:

We believe that it is unlikely that the increased mortality was due to the tight glucose control but rather due to the particular method for trying to achieve it. When *high-carbohydrate diets* are consumed and intensive medication therapy is used to 'cover the carbohydrate,' it is very difficult to achieve normal glycemic control *without hypoglycemic reactions.*

Dr. Westman and his colleague Dr. Mary Vernon set out to see whether a return to low-carb dietary treatment would have a more positive effect on diabetes patients.

They found that the beneficial effects of a low-carb diet in diabetes patients happen quickly. Drs. Westman and Vernon found that by reducing carbs in the diets of their patients, they were able to "taper patients off as much as 150 units of insulin per day in eight days."

With such immediate and dramatically positive results, it's no wonder that they explain in the study:

At the end of our clinic day, we go home thinking, "The clinical improvements are so large and obvious, why don't other doctors understand?"

This is perhaps the simplest and best way to put it.

LOW-CARB VS. LOW-GLYCEMIC: A LOOK AT THE GLYCEMIC INDEX

Sticking to a very low-carb diet works better than eating a low-glycemic one, much to the chagrin of carb apologists.

Let's take a step back and go over the basics of a low-glycemic diet, or glycemic index diet. The main principle of this diet is the simple fact that all carbohydrates raise blood sugar.

The answer seems simple, right? Simply cut carbs. Problem solved.

However, as you probably know from personal experience, that's easier said than done. People are very hesitant to cut carbs. Admittedly, it's a challenge. Pasta, bread, rice, and other grains have become the building blocks of our meals. Some researchers have even shown evidence that carbohydrates can have an additive quality, activating brain centers similar to those that drive addictions to opiates.

But even tenacious addictions can be beaten.

Anyway, hesitant to recommend cutting carbs entirely, some experts formed something called the glycemic index. Its purpose is to rate carbohydrates on a scale of 1–100, based on how drastically they raise your blood sugar.

So along with animal foods such as milk, meat, and eggs, low on the GI scale would be nuts, legumes, and green leafy vegetables. Medium-GI foods include bananas, corn, and whole grains. High-GI foods, which are the worst for you, are what you would expect — white bread, white rice, white potatoes, and sugary drinks.

I feel it necessary to point out that not only is a low-carb diet more effective — it's also much simpler. Who has time to remember what category each and every food item goes into?

The problem with whole grains is that they are still carbohydrates. So although they might spike your blood sugar somewhat less than milled grains would, they still do spike it.

A 2008 study published in Nutrition & Metabolism compared the effects of a low-carb ketogenic diet with those of a low-glycemic diet. They observed obese participants suffering from Type 2 diabetes over a 24-week period.

Both groups did see improvements. However, the low-carb group saw greater improvements in blood sugar, weight loss, and cholesterol levels.

Most astoundingly, 95.2 percent of folks doing the low-carb ketogenic diet threw their medication in the trash, or at least reduced it.

The freedom from diabetes medications and insulin injections is a much greater convenience, in my opinion, than the ability to eat the carbs that are killing us.

HOW DOES PALEO COMPARE?

The Paleo, or "primal" diet seems to be all the rage these days. With good reason.

It challenges us to eliminate the modern diet atrocities and eat the way that humans ate, and thrived, for millennia. Admittedly, prehistoric human beings ate a wide variety of diets — a jungle-dweller's dinner was significantly different from an Inuit's — but all such diets featured unprocessed foods and vigorous efforts to obtain animal or fish fat as a vital contributor to health.

There have been a few research studies on Paleo diets (which are also low-carb) that have shown success with patients who have diabetes and/or impaired glucose tolerance.

In 2007, researchers at the Lund University in Sweden set out to accomplish something a bit different with their study on glucose tolerance.

They explained that:

Most studies of diet in glucose intolerance and Type 2 diabetes have focused on intakes of fat, carbohydrate, fiber, fruits, and vegetables. Instead, we aimed to compare diets that were available during human evolution with more recently introduced ones.

In many ways, this sort of "big picture" look at Type 2 diabetes makes sense. Look back to the maps in Chapter 1 and how rapidly Type 2 diabetes has spread in the past two decades alone. It makes sense to assume that it's our modern lifestyle and diet that is causing our bodies to fail, not our bodies themselves.

Lund University compared a Paleolithic diet with a program based on the Mediterranean diet: whole grains, low-fat dairy products, vegetables, fruits, fish, and oils.

They found that there was a 26 percent decrease of AUC glucose in the Paleolithic group over 12 weeks, compared with a 7 percent decrease in the Mediterranean group. AUC stands for "area under the curve," and "the curve" is a graph line describing the body's typical ability to metabolize pure sugar. The greater AUC decrease with Paleo means subjects' blood sugar moved closer to a healthy range.

Also, the Paleolithic group lost an average of 5.6 cm in waist circumference, while the Mediterranean group lost an average of 2.9 cm.

As an added bonus, the Paleo diet increased satiety. In comparison to the Mediterranean diet, participants felt fuller and more satisfied with their meals.

Another study from the University of San Francisco School of Medicine sought to see whether a Paleolithic diet could play a role in lowering the risk of the "diseases of civilization," such as Type 2 diabetes, hypertension,

and obesity.

Over the course of just a few weeks, they determined that "a Paleolithic-type diet improves blood pressure and glucose tolerance, decreases insulin secretion, increases insulin sensitivity and improves lipid profiles without weight loss in healthy, sedentary humans."

It's becoming more and more clear that returning to our ancestral roots when it comes to the way we eat is the only sensible dietary course of action to take against these modern chronic conditions.

Perhaps no study illustrates this more effectively than a study surrounding Australian aborigines in 1984. Researchers selected a group of 10 middle-aged, overweight aborigines who had developed diabetes as a result of urbanization. They had them live a traditional hunter-gatherer lifestyle for seven weeks.

All 10 men experienced an urbanization reversal of sorts — the metabolic issues causing their Type 2 diabetes either ceased completely or drastically improved, and they lost weight.

By returning to the way their people lived for thousands of years, they rid themselves of their modern health issues.

GET ENOUGH SLEEP

An exciting new study published by the University of Chicago Medical Center in February 2015 revealed a connection between sleep deprivation and diabetes.

According to the researchers,

Lack of sleep can elevate levels of free fatty acids in the blood, accompanied by temporary pre-diabetic conditions in healthy young men. Getting enough sleep could help counteract the current epidemics of diabetes and obesity.

In other words, not logging enough hours of sleep at night was enough to impact the insulin, glucose, and stress levels of otherwise healthy young men. They saw a 15–30 percent increase in early-morning fatty acid levels, as well as an increase in insulin resistance that lasted up to five hours.

Overall, "the ability of available insulin to regulate blood glucose levels decreased by about 23 percent after a short sleep," suggesting what the authors note as an "insulin-resistant state."

Getting enough sleep at night is something that's sorely lacking in many of our lives. However, it's one of the easiest things to correct — and does the body good in so many ways.

Increased blood sugar regulation and insulin sensitivity are just the tip of the iceberg. Sleep heals the body and helps to keep us healthy.

Another overlooked piece of the diabetes puzzle is stress. Stress causes the release of cortisol into the bloodstream, which in turn raises blood glucose.

Under stress, only cells used in the fight-or-flight response are open to insulin. Other cells become insulin resistant to preserve energy for the cells needed to fight or run away. While this is useful if you're being chased by a bear, it's not so useful with everyday stress we all have.

Remaining aware of your stress levels is vital when it comes to keeping your blood sugar in check.

DIABETES BOOSTERS TO CUT FROM YOUR DIET

There are a number of external factors that contribute to the development of Type 2 diabetes.

Let's get right into what foods you actually should be avoiding to not only lower your risk of developing diabetes but also live a healthier life overall.

HIGH FRUCTOSE CORN SYRUP

At this point, there's no reason that you should still be eating high fructose corn syrup. It's a processed food that is absolutely catastrophic for the human body. It's a cause of obesity, heart disease, cancer, dementia, tooth decay, and a host of other evils.

The worst part is this is not new news. A study published back in 1980 in *The American Journal of Clinical Nutrition* found that high-fructose products caused a reduction in insulin sensitivity in healthy young men in just one week.

One week was long enough to essentially prep these otherwise healthy individuals for Type 2 diabetes. It all starts with insulin resistance.

A study from the University of Florida's Division of Nephrology also found that high fructose corn syrup causes metabolic syndrome far more than regular sugar.

Unfortunately, since we've been ignoring this information for over 30 years now, the average American is currently consuming more than 60 pounds of HFCS per year, largely as a result of artificially sweetened drinks and processed foods. Just another reason to eliminate that junk from your diet.

ARTIFICIAL SWEETENERS

This one surprises many people, including diabetics, who are typically heavy users of artificial sweeteners. We tend to assume that Splenda, Equal, and the like are better for us than real sugar. But a recent study in the journal Nature found that "artificial sweeteners induce glucose intolerance by altering the gut microbiota."

What that means in English is that artificial sweeteners kill the good gut bacteria — the kind that aids our digestion. This allows the bad gut bacteria to run wild. Researchers linked this to the development of metabolic disease in mice and maintained that the massive artificial sweetener consumption worldwide should be reassessed.

STATINS

After a relentless 40-year campaign, the drug industry has largely succeeded in persuading most people that the best indicator of heart disease risk is their level of LDL — or "bad" — cholesterol.

Conventional medicine suggests you've got to watch your bad cholesterol like a hawk and gulp down pills to get it into the right ratio.

When your cholesterol ratio is skewed — too much LDL, too little HDL — you often get talked into taking cholesterol drugs called statins. They've become so common in the U.S. that most people probably don't think twice about the prescription.

Unfortunately, statins come with a dirty laundry list of problems.

That's because not only do they inhibit production of cholesterol, they interfere with other intermediary substances which have important biochemical functions.

For example, they deplete the body of coenzyme Q10 (CoQ10), which is vital to heart health and muscle function.

Most doctors aren't really up to speed on the true dangers of statins.

Too many times, patients came down with fatigue, muscle weakness, soreness, and, in some cases, heart failure (after all, since muscle weakness is a known side effect, why would the heart — which is a concentrated mass of muscle tissue — be immune?).

Furthermore, Type 2 diabetes rates go up when people go on statins. A recent study in *BMJ* evaluated 136,966 patients over the age of 40 being treated with statins. They evaluated them over a 14-year period.

The researchers found that within the first two years of statin use, there was a significant increase in the risk of Type 2 diabetes onset. This risk was

particularly increased with high-potency statins. Lower-potency agents had less of a correlation.

Shockingly, the risk for diabetes onset was highest in the first four months of statin use. Overall, statins increased the risk of diabetes by about 9–12 percent.

The American Journal of Cardiology published similar results in 2014. They found that "statin use increases the risk of incident Type 2 diabetes mellitus in patients with clinically manifest vascular disease."

These results happened overall, regardless of whether or not the patients had other determining factors for diabetes. However, it was even more pronounced in those patients with low glucose levels to begin with.

Statin use was also found to increase the incidence of Type 2 diabetes in postmenopausal women as a part of the Women's Health Initiative. This study was conducted because women had been underrepresented in previous studies and clinical trials on the subject.

AND THE GMO CONNECTION

GMOs are a topic of hot debate. Scientists, politicians, and the general public are staunchly divided into two camps: those who claim that GMO foods and glyphosate are completely safe for human consumption and those who believe they are the cause of a host of ills.

Count me as part of the latter.

In 2013, two scientists published a review in the journal *Entropy* that took a strong stand for my side of the debate. The study describes how glyphosate, the main ingredient in Roundup, disrupts synthesis of sulfate, which is crucial to blood sugar control as well as arterial health.

According to the study, "Negative impact on the body is insidious and manifests slowly over time as inflammation damages cellular systems throughout the body."

The researchers argue that these long-term results include most Western diseases, such as obesity, diabetes, heart disease, infertility, cancer, autism, and more.

The fact of the matter is more GMO crops mean more glyphosate because they're designed to withstand Roundup spraying. In fact, 80 percent of genetically modified crops are designed to resist glyphosate, something called the "Roundup Ready" feature. This study shows how glyphosate is making its way into our bodies.

Studies have also indicated that consuming produce treated by gly-

phosate negatively affects the gut microbiota. This phenomenon could be contributing to the fact that inflammatory bowel diseases like Crohn's disease have recently increased substantially.

Research is still preliminary, and few scientists will touch the topic with a 10-foot pole because this is so controversial. But the solution is very simple:

Minimize, or completely avoid, GMO foods.

THE BEST KIND OF EXERCISE FOR ELIMINATING TYPE 2 DIABETES

I hate to break it to those of you who thought you'd get off easy, but exercise is a much bigger component of managing diabetes than most people realize.

Here, we actually will turn to the ADA for a moment — although their dietary guidelines for Type 2 diabetics miss the mark by a mile, they do occasionally get it right.

In 2010, they released a joint position statement with the American College of Sports Medicine regarding the importance of exercise for those at risk for or diagnosed with Type 2 diabetes.

They found that a combination of physical activity and modest weight loss can decrease the risk of developing Type 2 diabetes by a whopping 58 percent in those who are already at high risk. With those odds, it's simply irresponsible not to incorporate exercise into your routine.

Let's take a look at some of the impact exercise can have on Type 2 diabetes patients:

- improves blood glucose control
- positively affects lipids
- has a positive impact on blood pressure
- lowers the risk of cardiovascular events
- lowers the risk of mortality
- improves the quality of life
- can prevent or delay Type 2 diabetes.

The bottom line is most of the complications of Type 2 diabetes, as well as the condition itself, can be avoided if you simply engage in the proper nutrition program, exercise, and work to maintain a healthy weight.

Medications and insulin use may very well be necessary, but they should be used as supplements to your overall lifestyle rather than as the only solution.

WHAT KIND OF EXERCISE IS BEST FOR THOSE WITH TYPE 2 DIABETES?

If you're not regularly exercising, it's absolutely fine to start small — walking, hiking, leisurely bike rides. The most important thing is to get moving every single day. Stretching and other activities that will improve your flexibility and balance are also extremely beneficial.

However, aerobic routines like running, jogging, or biking are not the only options to optimize health. In fact, there are other methods of exercise that could provide better results for those at risk for or living with Type 2 diabetes.

For example, a study out of the Division of Gerontology at the Baltimore Veterans Affairs Medical Center (right in the same town as our Maryland headquarters) showed resistance training — like lifting weights — was just as effective in improving insulin sensitivity.

This is not surprising. Stronger muscles mean more proper storage of glycogen (sugar) and improved insulin sensitivity. These two key factors make the difference between a Type 2 diabetic and a normal, healthy person.

High-intensity interval training (HIIT) can also be very effective. Researchers in Canada found that six out of nine of their volunteers improved insulin resistance just two weeks after participating in an HIIT program. Furthermore, blood glucose was reduced immediately after each session.

A study published in the *Journal of Clinical Endocrinology & Metabolism* reiterated HIIT's benefits for Type 2 diabetics, and added another bonus. In their words:

Intermittent exercise, if proven to be effective in lowering blood glucose concentrations, may provide a more palatable alternative to potentially laborious, time-consuming continuous exercise.

In other words, HIIT could provide an alternative for those who don't seem to have enough time to participate in long runs or sessions at the gym. You can get similar if not better results in less time, and improve your blood sugar.

Finally, it turns out that exercise has a bigger impact for those people with worse health. Researchers at the University of Queensland conducted three years of studies on exercise and blood glucose levels.

The study, broken down into a four-week session for each group of 15–20 participants, did not show any statistically significant improvement in blood glucose or insulin sensitivity overall.

However, when scientists looked deeper and examined the results of volunteers with the worst levels blood sugar and insulin resistance, they did see an improvement. They found, essentially, that the worse your health is, the more important it is to begin exercise and the more dramatic your rebound will be.

If you're a diabetic, there are a few things you need to be cautious of when introducing exercise into your routine.

Exercise can sometimes cause what's referred to as "liver dumps" — instead of blood glucose (BG) levels decreasing, the liver will release glucose into the blood, causing a temporary rise in BG levels. Basically, since working out lowers your blood sugar levels, the liver panics and dumps extra insulin into your bloodstream to combat what it thinks is a problem.

Eating carbs based on pre-exercise levels helps with this. While I don't normally recommend carbs, some before a rigorous workout could be beneficial if you already have diabetes — it's the fuel the body recognizes the quickest, and can therefore combat a liver dump.

But this should be only a short-term strategy. As your body becomes accustomed to fueling itself from fat rather than carbs, you should find it easier and easier to maintain energy during a workout without carb-loading beforehand.

CONCLUSION

I want to make one last vital point about Type 2 diabetes before signing off. The truth of the matter is virtually everyone in America is somewhere on the metabolic syndrome/Type 2 diabetes spectrum.

In other words, almost no one in this culture has a level of blood sugar associated with optimal health. Our sedentary lifestyles, high stress levels, and consumption of heavily processed foods make that almost impossible, even for those of us with the best intentions.

Even if you've never been diagnosed with Type 2 diabetes, it is in your best interest to take steps to lower your blood sugar.

Prevention is the key to good health.

The Glycemic Index: Your Guide to Healthy Levels of Blood Sugar and Insulin

What is the Glycemic Index?

The glycemic index encompasses a scale of 0 to 100, with higher values given to foods that cause the most rapid and persistent elevation in blood

sugar. The reference point is pure glucose, which has a GI of 100. The greater the GI of a food, the higher the correlated insulin response.

WHAT IS GLYCEMIC LOAD?

The Glycemic Load takes into account the quantity of carbohydrate being consumed and how this is reflected in the glycemic response. By definition, the glycemic index compares equal quantities of carbohydrate. In 1997 the concept of glycemic load was introduced by researchers at Harvard University to quantify the overall glycemic effect of a typical portion of a given food. Thus, the glycemic load of a food reflects the glycemic index, but is simply adjusted to reflect a typical portion of that particular item. The higher the GL, the greater the expected elevation in blood glucose and the insulin response that will follow.

HOW DOES THE GLYCEMIC INDEX AFFECT ME?

Whether you are sick, well, overweight, metabolically compromised, experiencing brain issues, or just want to preserve your mental wellbeing, understand that the Glycemic Index plays a pivotal role. Choose foods with a lower GI while making sure they are gluten-free. This will maintain healthy levels of blood sugar and insulin. These are the keys to enhancing general health as well as brain health and function.

GLYCEMIC INDEX TABLES:

The following is a Glycemic Index Table provided by **Harvard Medical School**. Other helpful resources include:

- **American Diabetes Association**
- **American Journal of Clinical Nutrition**

Glycemic Index And Glycemic Load For 100+ Foods

FOOD BAKERY PRODUCTS AND BREADS	Glycemic index (glucose = 100)	Serving size (grams)	Glycemic load per serving
Banana cake, made with sugar	47	60	14
Banana cake, made without sugar	55	60	12
Sponge cake, plain	46	63	17
Vanilla cake made from packet mix with vanilla frosting (Betty Crocker)	42	111	24
Apple, made with sugar	44	60	13
Apple, made without sugar	48	60	9
Waffles, Aunt Jemima (Quaker Oats)	76	35	10
Bagel, white, frozen	72	70	25
Baguette, white, plain	95	30	15
Coarse barley bread, 75-80% kernels, average	34	30	7
Hamburger bun	61	30	9
Kaiser roll	73	30	12
Pumpernickel bread	56	30	7
50% cracked wheat kernel bread	58	30	12
White wheat flour bread	71	30	10
Wonderâ¢ bread, average	73	30	10
Whole wheat bread, average	71	30	9
100% Whole Grainâ¢ bread (Natural Ovens)	51	30	7
Pita bread, white	68	30	10
Corn tortilla	52	50	12
Wheat tortilla	30	50	8
BEVERAGES			
Coca ColaÂ®, average	63	250 mL	16
FantaÂ®, orange soft drink	68	250 mL	23
LucozadeÂ®, original (sparkling glucose drink)	10	250 mL	40
Apple juice, unsweetened, average	44	250 mL	30
Cranberry juice cocktail (Ocean SprayÂ®)	68	250 mL	24
Gatorade	78	250 mL	12
Orange juice, unsweetened	50	250 mL	12
Tomato juice, canned	38	250 mL	4

FOOD BREAKFAST CEREALS AND RELATED PRODUCTS	Glycemic index (glucose = 100)	Serving size (grams)	Glycemic load per serving
All-Branâ¢, average	55	30	12
Coco Popsâ¢, average	77	30	20
Cornflakesâ¢, average	93	30	23
Cream of Wheatâ¢ (Nabisco)	66	250	17
Cream of Wheatâ¢, Instant (Nabisco)	74	250	22
Grapenutsâ¢, average	75	30	16
Muesli, average	66	30	16
Oatmeal, average	55	250	13
Instant oatmeal, average	83	250	30
Puffed wheat, average	80	30	17
Raisin Branâ¢ (Kellogg's)	61	30	12
Special Kâ¢ (Kellogg's)	63	30	14
GRAINS			
Pearled barley, average	28	150	12
Sweet corn on the cob, average	60	150	20
Couscous, average	65	150	9
Quinoa	53	150	13
White rice, average	89	150	43
Quick cooking white basmati	67	150	28
Brown rice, average	50	150	16
Converted, white rice (Uncle Ben'sÂ®)	38	150	14
Whole wheat kernels, average	30	50	11
Bulgur, average	48	150	12
COOKIES AND CRACKERS			
Graham crackers	74	25	14
Vanilla wafers	77	25	14
Shortbread	64	25	10
Rice cakes, average	82	25	17
Rye crisps, average	64	25	11
Soda crackers	74	25	12
DAIRY PRODUCTS AND ALTERNATIVES			
Ice cream, regular	57	50	6
Ice cream, premium	38	50	3
Milk, full fat	41	250 mL	5
Milk, skim	32	250 mL	4
Reduced-fat yogurt with fruit, average	33	200	11

FOOD FRUITS	Glycemic index (glucose = 100)	Serving size (grams)	Glycemic load per serving
Apple, average	39	120	6
Banana, ripe	62	120	16
Dates, dried	42	60	18
Grapefruit	25	120	3
Grapes, average	59	120	11
Orange, average	40	120	4
Peach, average	42	120	5
Peach, canned in light syrup	40	120	5
Pear, average	38	120	4
Pear, canned in pear juice	43	120	5
Prunes, pitted	29	60	10
Raisins	64	60	28
Watermelon	72	120	4
BEANS AND NUTS			
Baked beans, average	40	150	6
Blackeye peas, average	33	150	10
Black beans	30	150	7
Chickpeas, average	10	150	3
Chickpeas, canned in brine	38	150	9
Navy beans, average	31	150	9
Kidney beans, average	23	150	7
Lentils, average	23	150	5
Soy beans, average	15	150	1
Cashews, salted	27	50	3
Peanuts, average	7	50	0
PASTA and NOODLES			
Fettucini, average	32	180	15
Macaroni, average	47	180	23
Macaroni and Cheese (Kraft)	64	180	32
Spaghetti, white, boiled, average	46	180	22
Spaghetti, white, boiled 20 min, average	58	180	26
Soda crackers	42	180	17
SNACK FOODS			
Corn chips, plain, salted, average	42	50	11
Fruit Roll-UpsÂ®	99	30	24
M & M'sÂ®, peanut	33	30	6
Microwave popcorn, plain, average	55	20	6
Potato chips, average	51	50	12
Pretzels, oven-baked	83	30	16
Snickers BarÂ®	51	60	18

FOOD VEGETABLES	Glycemic index (glucose = 100)	Serving size (grams)	Glycemic load per serving
Green peas, average	51	80	4
Carrots, average	35	80	2
Parsnips	52	80	4
Baked russet potato, average	111	150	33
Boiled white potato, average	82	150	21
Instant mashed potato, average	87	150	17
Sweet potato, average	70	150	22
Yam, average	54	150	20
MISCELLANEOUS			
Hummus (chickpea salad dip)	6	30	0
Chicken nuggets, frozen, reheated in microwave oven 5 min	46	100	7
Pizza, plain baked dough, served with parmesan cheese and tomato sauce	80	100	22
Pizza, Super Supreme (Pizza Hut)	36	100	9
Honey, average	61	25	12

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HEAT UP YOUR SEX LIFE WITH THESE HORMONE SECRETS

The Health Benefits of Sex

Here in *Natural Health Response*, I've covered the importance of exercise at length. Well, sexual activity burns calories and fat, and it's been suggested that people with active sex lives tend to exercise more frequently and have better dietary habits than those who are less sexually active, according to a 2007 report published in cooperation with the Society for the Scientific Study of Sexuality.

"Orgasm floods the brain with oxytocin, which has a proven anxiolytic (anti-anxiety) effect."

So let's take a look at six ways sex does a body good:

- A stronger immune system. A 2013 study conducted at the University of Michigan indicates there is a strong correlation between an individual's sexual habits and the level of antibodies in the saliva. Scientists at Wilkes University, in Wilkes-Barre, Pennsylvania, have found that people who engaged in sex one–two times per week had more of the antibody immunoglobulin A in their external body secretions (sweat, saliva and tears) than people who engaged in sex less frequently. This is a good thing, because as the first line of immune defense, immunoglobulin antibodies attach to foreign invaders and help eliminate them, keeping colds at bay

- Sounder sleep. Hormones and endorphins released during sex decrease stress, relaxing the mind and priming the body for sleep. Orgasm floods the brain with oxytocin, which has a proven anxiolytic (anti-anxiety) effect. A surge of the hormone prolactin upon climax adds to the feeling of sleepiness. Be sure to note that rigorous sex, like any strenuous exercise, increases energy levels. But a slow session can help you snooze

- Lower risk of cancer. The AARP highlights an eight-year study where National Cancer Institute researchers tracked orgasms and risk of prostate cancer in 29,342 men, ages 46–81. As the frequency of orgasms increased, the risk of developing prostate cancer decreased — by as much as 33%. And according to the National Health Service of England, it's been suggested that regular exercise, which would include sex, can reduce your risk of developing breast cancer by as much as a third

- Improved cardiovascular health. In women, both a larger waist size and a higher waist-hip ratio are associated with heart risk. In men, a larger waist size is considered to be the most powerful measure of CHD risk. And in both sexes, an increased waist circumference is the strongest predictor of Type 2 diabetes. How does sex come into play here? Well, researchers have identified that for both men and women, there is a correlation between sexual activity and a decreased hip and waist circumference

- Better bladder control. Ever laughed so hard you peed a little? How about when you sneezed? Sex can help combat this, as sex strengthens your pubococcygeus (PC) muscles, minimizing the risks of incontinence. Healthy PC muscles also amplify sensations of pleasure, increase vaginal lubrication and improve core strength. Women who continue to enjoy sexual activity after menopause are also less likely to experience significant vaginal atrophy

- Pain relief. Sexual arousal and orgasm both increase levels of endorphins and corticosteroids in the body, thereby raising pain thresholds and easing discomforts associated with arthritis, menstrual cramps, migraines and other conditions. Sex is also a distraction from discomfort, as it provides relief by shifting your focus from pain to pleasure.

Of course, these aren't the only reasons to have sex, nor are they the only perks that sexual activity can provide. With so many health benefits to gain, doesn't that just put you in the mood?!

Boost Your Testosterone… Naturally!

A Vital Hormone For Both Men and Women, Here's How To Increase Your "T"

Testosterone is the principal anabolic and sex hormone in humans, responsible for sexual desire and function, muscular hypertrophy, densification of bones, and hair growth.

Compared to females, males famously produce about ten times the amount of testosterone, but females are far more sensitive to its effects.

Though testosterone is largely responsible for those traits and characteristics that are considered "masculine" — physical strength, body hair, dominance, and virility — both sexes require it for proper sexual and physical development.

In mammals, males secrete it primarily from the testicles (about 95 percent of the total amount, in fact) and women secrete it from the ovaries. A modicum is produced in the adrenal glands in both sexes.

Testosterone plays an important role throughout every stage of a person's life:

- Prenatally, testosterone — along with dihydrotestosterone, a more potent anabolic hormone — is partly responsible for the formation of the male genitalia. It helps determine gender identity (with society bringing up the rear later in life, of course) and it spurs development of the prostate and seminal vesicles

- In early infancy, boys' testosterone levels rise, almost to puberty levels, only to plummet at four to six months. We're still not entirely sure what the rise means and what all that testosterone is doing, but it's definitely doing something. One theory is that the brain is being "masculinized"

- Immediately prior to puberty, testosterone begins to rise in both boys and girls. Childhood is departing, replaced by budding pubic hair, the beginnings of body odor, growth spurts, oily hair and skin, and that ridiculous peach fuzz above the lips that every elev-

en-year-old male tries to cultivate and claim as facial hair. Bones mature and the armpits grow hair

- During puberty, testosterone enjoys a massive increase. Most of you reading this probably recall those awkward, exciting change-filled times: new odors, inconvenient fluctuations in the functionality and appearance of certain organs, strange new outlooks on the opposite sex. Good times. Thanks, testosterone!

- In adults, testosterone's effects on growth and development have largely manifested, and maintenance becomes its province. Libido is preserved for both men and women, and erection strength and frequency are regulated by testosterone. Muscles resist wasting thanks to T (and even grow larger).

If you want to manipulate the amount of testosterone you have available, you can do it the same way you manipulate other hormones, like insulin, leptin, growth hormone, and cortisol. You tinker with your diet, your exercise, and your basic daily lifestyle:

- **Lift heavy things.** Resistance training is a potent stimulant of testosterone production, so be sure to lift heavy things every now and again. If you want to tinker even further, messing around with rest intervals between sets can stimulate different hormonal responses. In one study, resting 90 seconds between squat and bench press sets boosted post-workout T levels the most, followed by rest periods of 120 seconds. Resting 60 seconds increased growth hormone the most and T the least

- **Sprint**. In young men, a short six-second bout of sprinting increased total serum testosterone levels. Levels remained elevated during recovery. Interestingly, testosterone was also correlated with lactate levels in the blood. It would be even more interesting to know if any training that causes lactate levels to rise would also increase testosterone

- **Avoid excessive cortisol.** Since cortisol antagonizes and reduces free testosterone levels, and stress promotes the release of cortisol, avoiding stress becomes crucial for maintaining or boosting T levels. Make sure you get a good night's sleep every night (which in and of itself increases testosterone levels). Avoid overtraining,

especially in the Chronic Cardio arena, which may affect T levels and reproductive function. And be sure to take time to chill out and relax (read a book, go for a walk, play).

- **Get sun, or take vitamin D supplements.** Vitamin D, already associated with bone and muscular strength, also positively correlates with testosterone levels in men. Back in February, the vitamin D/T link got a decent amount of media attention

- **Eat clean, pastured animal products.** Toxic substances called dioxins have been shown to interfere with the male reproductive system, including production of testosterone. We obtain most of our dietary dioxins through conventionally raised animal products, especially animal fats and dairy (dioxins accumulate in fat). If you're going to be eating fatty cuts of meat or using dairy, try to go for pastured, grass-fed animals to reduce your exposure and lessen the negative impact on your testosterone levels

- **Eat saturated and monounsaturated fat**. A low-fat, high-fiber diet reduced serum and free testosterone levels in middle-aged men. T usage wasn't affected, but T production was reduced. Another look at male athletes found that saturated fat, monounsaturated fat, and cholesterol intakes were positively correlated with resting testosterone levels. PUFA (Polyunsaturated Fatty Acid) intake was barely associated with increased levels

- **Avoid foods that regularly spike your blood glucose levels.**Researchers found that 75 grams of pure glucose — and the resultant spike in blood sugar — was enough to drop testosterone levels by as much as 25 percent in a random grouping of healthy, prediabetic, and diabetic men. Now keep in mind how rapidly many carb choices (pasta, cereal, bread, etc.) convert to glucose upon digestion

- **Get adequate zinc intake.** A zinc deficiency predicts lowered testosterone in men (eat your shellfish), but heroic supplementary doses of the mineral don't boost T levels beyond normal in men with adequate dietary intake.

Providing Relief for the Miserable Symptoms of Menopause

Is Hormone Replacement Therapy Right for You?

"I was waking up with anxiety every day for six months. I felt physically ill, lost weight, had trouble sleeping. Then I started getting hot flashes, night sweats, and horrible emotional attacks, and I realized what was happening to me: I was in perimenopause."

"Andrea" posted this in an online forum on menopause. The symptoms she experienced are shared by millions of women each year.

From hot flashes to night sweats, mood swings to vaginal dryness, declining estrogen and progesterone levels during menopause can make women feel completely miserable — sometimes for years. In an effort to get relief, many women are interested in hormone replacement therapy, or HRT.

HRT involves taking replacement estrogen and progesterone via an oral pill, patch, or transdermal cream applied to the skin.

There are two types of HRT compounds: bioidentical hormones and nonbioidentical hormones. But is one better than the other?

WHAT'S THE DIFFERENCE?

Bioidentical hormones are completely identical in structure to the hormones made naturally by the body. That means your body can't tell the difference between the hormones it's producing naturally and the replacement hormones. Bioidentical HRT drugs are made from a chemical extracted from yams or soy, which is then synthesized so that its molecular structure becomes "bioidentical."

Nonbioidentical hormones, meanwhile, come in two forms: "natural" and synthetic. Both of these have a different structure to bioidentical hormones, so the body doesn't use them in quite the same way.

The two most popular forms of "natural" nonbioidentical hormones are Premarin (produced from pregnant mares' urine) and Cenestin (produced from plants), while synthetic hormone drugs include brands such as Estrace and Provera.

Though studies comparing the various types of hormone therapies are limited, a 2009 research paper looked at all the studies published on HRT up until that point and found that bioidentical hormones were *more* effective than nonbioidentical hormones (including both synthetic

and animal-derived forms) for relieving certain symptoms of menopause, including hot flashes and vaginal dryness.

That lines up with the experience "Andrea" reported from her bioidentical HRT. "My doctor put me on birth control pills and depression and anxiety medications, which only made things worse," she wrote. "I finally started using a progesterone cream three weeks of each month, and I feel so much better."

SIDE EFFECTS & SAFETY

In that 2009 research paper, it was reported that bioidentical progesterone had a protective effect against breast cancer cell proliferation, whereas synthetic progestin increased breast cell proliferation. Synthetic progestin also increased the conversion of weaker estrogen to more potent and potentially carcinogenic estrogen compounds.

One study found that women who took bioidentical progesterone with estrogen therapy had a decreased risk of breast cancer compared against women who took synthetic progestin with estrogen therapy. According to the 2009 review paper, multiple other studies have found that progesterone is protective against the increased risk of breast cancer that results from estrogen therapy as well.

Progesterone also has a protective effect against heart disease by maintaining levels of HDL (the "good" cholesterol), promoting vasodilation of the coronary arteries, and inhibiting plaque formation. Synthetic progestin, on the other hand, has the *opposite* effect.

The method of administration for hormone therapy can also have a big effect on its safety. Oral hormones must be processed first by the liver, which can stimulate C-reactive protein, a risk factor for heart disease, while also stimulating clotting factors. Hormones delivered via a patch or transdermal cream, however, *don't* have the same effect.

Some doctors will prescribe a "compounded" formula of bioidentical hormone, which is basically a custom formula tailored to each patient and made specially in a "compounding pharmacy."

It's important to realize, though, that the custom-made compounds of bioidentical hormones produced in a compounding pharmacy have *not necessarily* been tested in human studies for safety or effectiveness. In addition, compounding pharmacies are not required to meet FDA pharmaceutical manufacturing standards.

If you do decide to use a compounded medication, look to find a com-

pounding pharmacist that is accredited by the Pharmacy Compounding Accreditation Board.

Lastly, I should point out that HRT, whether bioidentical or not, is currently not recommended for women who have a history of breast or uterine cancer, liver disease, blood clots, or cardiovascular disease.

BOTTOM LINE

HRT is an evolving and nuanced topic, beyond what can be covered in one article. If you're interested in trying bioidentical hormones, it's essential to find a practitioner who has used HRT successfully in their practice for a long time and is willing to listen to your needs. Also, you may need to tinker with the dose to find exactly what works best for you.

If you decide to try any type of hormone therapy, it's imperative to listen and be in tune with how your body is reacting to the hormones. Andrea summed it up nicely in her post: "Ladies, learn to listen to your bodies. Don't blindly trust your doctors if you feel their medications or advice aren't working. Find someone who understands hormones."

Naturally Increase Testosterone Levels By 100x

Christopher Walker was in college when he started to experience depression and fatigue, so much so that he had to take a medical leave of absence.

Within eight months, he had gotten himself back on track. He was energized, in shape, sleeping well and competing in triathlons. The only thing missing was his sex drive.

After several trips to the doctor, they were able to pinpoint the problem. Christopher had a benign tumor in his pituitary gland which was blocking the secretion of several major hormones — the most notable being testosterone.

After being prescribed a series of drugs that didn't work, Christopher took matters into his own hands. Within the year, he had raised his testosterone levels from almost nothing (11 ng/dL at the time of diagnosis, where 300-1100 is the normal range for men), to an astounding 1192 ng/dL.

And it was all done naturally.

Through a mixture of calisthenics, intensive training and diet, Christopher was able to trick his endocrine system into producing testosterone again.

But it was one factor in particular that really had us interested. Some-

thing we had never heard of before.

Christopher says that in addition to following a high-fat, high-carbohydrate diet, he practices intermittent fasting.

In a story Christopher wrote for *Muscle for Life*, he said that he firmly believes intermittent fasting plays a major role in his health. He recommends doing so daily, and says that it can be as simple as skipping breakfast and limiting late-night eating.

He also says that "in non-obese men, the effects of a short-term fast were staggering, with a 67% increase in LH (luteinizing hormone) response and a 180% increase in testosterone."

"With this in mind, doing a short-term fast daily may have profound, almost immediate effects on your endocrine balance, especially because LH pulsing needs to spike regularly in order to have a noticeable effect on your overall T levels."

Adding a small daily fast to your day could trick your body into spiking your T levels, back up to what they were as a teenager.

To learn more about how to naturally boost your testosterone like Christopher, visit **www.muscleforlife.com/how-to-increase-testosterone-naturally**.

Boost Your Sex Drive

There's no reason at all for your love life to fade as you grow older. It's entirely possible to maintain your passion and intimacy well into old age.

We'll reveal some all-natural secrets that will give you the sex drive you had back in college.

THE ASIAN SECRET TO BETTER SEX

The secret to adrenaline-pumping, sheet-ripping sex could lie within a weird Asian herb.

Ginseng is often referred to as the king of all herbs, and possesses many medicinal properties. In fact, the genus name for ginseng is "panax," the Greek word for "all-healing." Among its many benefits is its role as an aphrodisiac — traditional Chinese medicine uses ginseng to enhance sexual behavior.

One study out of the University of Hong Kong's School of Biological Sciences reported that in 2010, approximately 48.5 million couples worldwide were infertile, with 40% of those cases being attributed to the male partner.

Luckily, ginseng has been found to increase sperm quality and count in both healthy patients and in patients with infertility issues. It is so powerful that it has even been shown to reverse infertility in patients recovering from cancer treatments. After taking American ginseng at a dose of 500 mg per day, those patients who became infertile during chemotherapy saw that condition reversed.

Ginseng has been proven to improve both erectile performance and sexual satisfaction for men with erectile dysfunction. For example, "a study on 60 men with erectile dysfunction also reported marked improvement in erectile function including rigidity, penetration, and maintenance of erection after taking Korean red ginseng (1000 mg) three times daily for 12 weeks."

Some types of ginseng have also been found to increase testosterone levels, as well as increasing sex drive.

This ancient Chinese secret could do wonders for your love life, correcting infertility and erectile dysfunction.

THE EXECUTIVE CONFIDENCE BOOSTER

It's apparent that for most people, muscle mass declines with age.

This leads to a whole host of health issues. And to top it off, it leaves us feeling old and decrepit — not young, strong and attractive like we once were.

Recently, researchers at UC Berkeley discovered that a new factor might come into play when it comes to our muscle health.

Oxytocin is a hormone that they say is associated with maternal nurturing, social attachments, childbirth and sex. Turns out, it's also necessary for muscle maintenance and repair. In June 2014, it was presented in the journal *Nature Communications* as "the latest treatment target for age-related muscle wasting, or sarcopenia." It's also such a powerful painkiller that it is used to help with labor.

Oxytocin's benefits don't stop there. Berkeley reports that "oxytocin is sometimes referred to as the "trust hormone" because of its association with romance and friendship. It is released with a warm hug, a grasped hand or a loving gaze, and it increases libido."

Unfortunately, while oxytocin is found in high levels in young people, it declines with age.

This might not always be the case. UC Berkeley's new study found that when injected into old mice, oxytocin increased healing as well as repaired healthy muscle mass. The lab plans on continuing its research into oxyto-

cin's anti-aging benefits for humans.

In the meantime, physical contact like kissing, holding hands, having sex or even maintaining eye contact can help release oxytocin in your brain.

THE BRAZILIAN BILLIONAIRE'S PASSION FOR LIFE

Albilio Diniz swears that he can beat death.

At age 77, he's married to a 41-year-old woman and has two small children — a 7-year-old daughter and a 3-year-old son.

In case you're wondering, his wife is younger than all of his children from his first marriage.

When it comes to aging, Diniz is simply not interested. He has created a plan to avoid it completely, and even published his secrets to living well in a book called "Smart Choices for a Successful Life."

In an article for Bloomberg, Diniz gave a peek into his tricks: "I have to believe I'm eternal. Even if there's some decline in physical terms — a little less strength, a little less muscle tone — I'm gaining so much in terms of experience. I'm getting the wisdom of age without the problems of aging."

He recommends six main things to remain youthful — exercise every day, burn more calories than you consume, limit your commitments, explore your inner psyche and pray to God are five.

The most important one? Stay passionate.

"I have loved the women in my life fiercely," he says in the Bloomberg article. "Each one in her time."

Whatever he's doing, it's clearly working. "Abilio is super-romantic, caring, serene," his wife Geyze told *ALFA*, a Brazilian men's magazine. "We never fight. During sex, he's like a boy. He has pep. He's not only ripped; he's healthy, and his body works."

THE TESTOSTERONE KILLER YOU EAT EVERY DAY

On average, Americans eat about 130 pounds of sugar every year. This grossly disproportionate number has a hand in most of the current epidemics that we're facing, including obesity, diabetes and cancer.

At this point, it's safe to assume that we're all aware that eating too much sugar, or drinking sodas and other sugar-loaded beverages can make you gain weight.

But it could also be affecting your love life in ways you wouldn't expect.

Dr. Al Sears explains that refined sugar can lead to impotence problems, like erectile dysfunction.

Dr. Sears explains this phenomenon below:

A study in the *Journal of Clinical Investigation* shows too much glucose and fructose can deactivate the gene that controls the amount of sex hormones in your blood.

When your liver breaks down these sugars, the process deactivates the SHBG (sex hormone binding globulin) gene. Why is SHBG so important? It helps to regulate hormones floating around in your bloodstream.

Without SHBG to help balance hormones, your actual sex hormones get out of whack (which often leads to impotence in men or simply a low libido). For women the effects of this hormonal imbalance are even worse. In addition to the development of blood sugar problems, such as diabetes (which can also significantly decrease a woman's libido), low SHBG levels can also cause infertility, polycystic ovaries, acne and uterine cancer.

Obviously, if you're going to take control of your sexual health,one of the first things you should do is begin avoiding sugar and high fructose corn syrup. To satisfy a sweet tooth, eat naturally sweet fruit instead of candies or pastries. Cherries are great since they have a low glycemic index.

If you like to add sweetener to your food, try something I learned while traveling in the mountains of Peru. It's a very interesting fruit-like vegetable called yacon. Instead of sucrose or fructose, yacon consists of fructooligosaccharides, a particular natural combination of sugar rings that human beings cannot digest. So it does not affect blood sugar.

Another thing I like about yacon is that it has inulin, a prebiotic-like compound that helps you digest other foods and enhances immunity because it promotes beneficial bacteria in your intestines.

Stevia is an all-natural sweetener that's been used for hundreds of years with no side effects. You can use it to sweeten tea, lemonade and even food. It's about eight times sweeter than sugar, so a little goes a long way.

Three Smart Ways to Boost Testosterone

Ensuring Healthy Testosterone Levels Is Vital — for Both Men and Women

Testosterone is the main male sex hormone, but females also have small amounts of it.

It is a steroid hormone, produced in men's testicles and women's ova-

ries. The adrenal glands also produce small amounts. During puberty in boys, testosterone is one of the main drivers of physical changes like increased muscle, deeper voice and hair growth.

However, having optimal levels is also important throughout adulthood and even during old age.

In adults, healthy levels are important for general health, disease risk, body composition, sexual function and just about everything else.

Additionally, increasing your testosterone levels can cause rapid gains in muscle mass and vitality in only a matter of weeks. Interestingly, it also plays an important role in female health and sexual well-being.

The research is pretty conclusive: Whether you're male or female, you should ensure you have healthy levels of testosterone, especially as you age.

Here are three evidence-based ways to increase testosterone levels naturally.

1. EXERCISE AND LIFT WEIGHTS

Not only is exercise one of the most effective ways to prevent many lifestyle-related diseases, it's been found that people who exercise regularly also have higher testosterone levels.

In both the short and long terms, resistance training, such as weight lifting, is the best type of exercise to boost testosterone. High-intensity interval training (HIIT) can also be very effective, although all types of exercise should work to some extent.

Taking caffeine and creatine monohydrate as supplements may further boost your levels when combined with a training program.

2. GET SOME SUN OR TAKE A VITAMIN D SUPPLEMENT

Vitamin D is quickly becoming one of the world's most popular vitamins. Research has shown that it has various health benefits and may also work as a natural testosterone booster.

Despite its importance, nearly half of the U.S. population is deficient in vitamin D, and an even higher percentage has suboptimal levels.

A 12-month study found that supplementing with around 3,000 IU of vitamin D-3 per day increased testosterone levels by around 25 percent. In the elderly, vitamin D and calcium also optimized testosterone levels, which led to a reduced risk of falling.

To boost testosterone and reap the other benefits of vitamin D, try to get regular exposure to sunlight or take around 3,000 IU of a vitamin D-3 supplement daily.

3. GET PLENTY OF RESTFUL, HIGH-QUALITY SLEEP

Getting good sleep is just as important for your health as diet and exercise. It may also have major effects on your testosterone levels.

The ideal amount of sleep varies from person to person, but one study found that sleeping only five hours per night was linked to a 15 percent reduction in testosterone levels. One long-term study observed that those who slept only four hours per night had borderline deficient levels.

Other long-term studies support this. One study calculated that for every additional hour of sleep you get, testosterone levels rise 15 percent higher, on average.

Although some people seem to do fine with less sleep, research suggests around seven–10 hours of sleep per night is best for long-term health and your testosterone.

Bottom line: Make sure you get plenty of high-quality sleep to maintain healthy testosterone levels and optimize your long-term health.

Natural Male Potency Cures

Let's face it, this is not a life-threatening disease. However, erectile dysfunction is considered the most common untreated medical condition in the world. It's estimated that nearly 20 million men in the United States struggle with getting it up.

As you can imagine, most men are simply too embarrassed to discuss it, let alone visit a doctor. But — it's not something to gloss over.

ED can cause turmoil in relationships. And it may signal other medical conditions.

No doubt you can probably guess what the drug answer is for ED.

Viagra.

Just pop one of these pills an hour before sex and you're good to go. However, this drug doesn't come without costs. Besides the constant shelling out of clams to buy it, it comes with side effects which may include:

- Sudden vision loss;
- Ringing in your ears, or sudden hearing loss;
- Chest pain or heavy feeling, pain spreading to the arm or shoulder, nausea, sweating, general ill feeling;
- Irregular heartbeat;
- Swelling in your hands, ankles, or feet;
- Shortness of breath;

- Vision changes;
- Feeling light-headed, fainting; or
- Penis erection that is painful or lasts 4 hours or longer.

Less serious side effects may include:

- Warmth or redness in your face, neck, or chest;
- Stuffy nose;
- Headache;
- Memory problems;
- Upset stomach; or
- Back pain.

Did one of those side effects include "losing your soul"? Geesh… there's so many.

You've got to ask yourself the question. Do you want to spend the rest of your life popping these pills and timing your hard-on? Why do that if you can alleviate ED by fixing the root cause?

NATURE'S VIAGRA

Pycnogenol is a substance extracted from the bark of pine trees. It's been shown to have a wide variety of health benefits. Originally, people took it as a post-workout supplement. Trainers and other fitness enthusiasts realized the substance helped lower recovery time between workouts. It helped prevent soreness and regulated insulin production in the body.

It was not until sometime later that scientists began looking into other possible health benefits of the extract. And they were especially intrigued when they saw it helped men suffering from erectile dysfunction. Eventually, people started calling it Earth's "natural Viagra," and many men continue to enjoy its natural benefits.

It works by stimulating the enzyme known as endothelial nitric oxide synthase. This enzyme is able to convert amino acids into nitric oxide. This helps stimulate other enzymes throughout the entire body, including sexual organs. It can even boost blood flow in men and help improve performance. Just make sure you or your partner take it an hour before you get intimate.

Did you know that diabetes and atherosclerosis could actually be the cause of male impotency? These ailments cut off blood flood to the penis, making it difficult for men to achieve erections.

TWO FOR THE PRICE OF ONE

Testosterone is one of the driving forces between masculinity and femininity in people. Men produce the hormone through the testicles, and it helps them increase their muscle mass, regulate red blood cells, grow bones, and promote their sexual drive. These are all essential when a man is intimate with his partner. The more testosterone produced in the body, the stronger the sexual desire. On the flip side, decreased levels of testosterone could lead to male intimacy problems.

There was one interesting case of a woman by the name of Alice. She went to her doctor with a number of problems. She had just recently gained 20 pounds, had lost her sex drive, and she was afraid her husband was going to leave her. The doctor ran some tests to find out what was wrong. When the tests showed she had zero levels of one particular hormone in her system, he knew what to do.

After giving her a shot of testosterone, things quickly took a turn for the better. She lost the excess weight, reconnected with her husband, and found a bright new outlook on life. All thanks to a shot of testosterone.

Testosterone therapy can help men produce higher levels of the hormone. This gives them better performance in bed. You should know, though, this therapy should not be used by men who have had breast or prostate cancer. It would prevent the body from fighting off the disease. All other young men should take it in accordance to their doctor's advice. Testosterone levels increase a great deal via shots, patches, gels, and oral tablets. These therapy methods will help train the body to produce more testosterone without these outside factors.

Before you consider testosterone therapy, here are 10 questions you should ask yourself to see if this is right for you.

1. **Do you have a decrease in libido or sex drive?**
2. **Do you have a lack of energy?**
3. **Do you have a decrease in strength and/or endurance?**
4. **Have you lost weight?**
5. **Have you noticed a decreased "enjoyment of life"?**
6. **Are you sad and/or grumpy?**
7. **Are your erections less strong?**
8. **Have you noticed a recent deterioration in your ability to play sports?**
9. **Are you falling asleep after dinner?**
10. **Has there been a recent deterioration in your work performance?**

Also note that hormone replacement therapy might not be the right choice for women. One form of therapy, Pempro, could cause women to gain weight, retain fluid, increase the chance of developing blood clots, and make detecting certain cancers (like breast tumors) more difficult.

THE HIDDEN NUTRIENT THAT CAN RESURRECT YOUR SEX DRIVE

Vitamins and minerals help your body function year round. However, sometimes it can be difficult for your body to produce enough of these vital substances to function properly. In fact, men who suffer from erectile dysfunction may have a **zinc** deficiency. So eating foods high in this nutrient could help could help correct this problem. Talk to your physician before you try anything. He or she might recommend you take over-the-counter supplements instead of altering your diet.

See your doctor if you think your zinc levels are too low. Low zinc levels and erectile dysfunction may also be symptoms of diabetes and other illnesses.

THE THREE SECRET NUTS TO SOLID ERECTIONS

Walnuts, pistachios, almonds and other nuts all help decrease the symptoms associated with erectile dysfunction. Studies have even shown that they help men improve their health in up to three weeks.

The secret behind nuts is their ability to lower LDL cholesterol while promoting HDL cholesterol. Lowering the former allows the body to filter out toxins from the blood stream. This help clears out arteries, providing better blood flow and circulation throughout the body. Decreased blood flow is one of the main signs of erectile dysfunction. Improving blood could flow help lead to an increase in sexual function and mitigate other ailments.

Nuts aren't the only things you can take to kickstart your sex drive. Here's 7 more potent natural stimulants you can start taking today: 1) oatmeal, 2) flaxseed, 3) chestnuts, 4) the semi-essential amino acid histidine (commonly found in chicken, saltwater fish, and soy), 5) spicy foods like garlic, onions, cinnamon, and coriander, 6) aromas like pumpkin pie, black licorice, and vanilla, and, of course, 7) horny goat weed.

EXERCISE SECRETS YOU'LL NEVER LEARN AT THE GYM

Get a Workout in 3 Minutes

Long Known to Athletes, This Type of Exercise Is Now Beginning to Enter the Mainstream

You're a busy office worker. I'm a busy office worker.

We'll examine the value of our desk-bound labors later and simply stipulate our mutual overwhelming sedentary obligations.

So we put off the gym date, our Nike Zoom Airs collect dust, our waistlines expand, and our youthful vigor recedes over the far horizon.

Chin up, *tovarich* — here's the solution.

THE VALUE OF SHORT, INTENSE WORKOUTS

There's been a lot of compelling research lately on the merits of workouts that are short in duration but high in intensity. Incredibly, even a three-minute workout can have the same benefit as one lasting 90 minutes to two hours.

But you didn't just fall off the radicchio truck. You're looking for the catch.

Indeed, there is one.

As one researcher put it, you must commit to spending most of that brief interval at an "8 or above" on a 1–10 intensity scale.

In other words — and excuse the vernacular — you need to seriously bust ass.

This sort of exercise is known as high-intensity interval training, or HIIT. It has long been known to serious athletes, but is now finally entering the mainstream.

A study at Canada's McMaster University found that six 30-second sprints on a stationary bike, each followed by just a few seconds of rest, led to the same level of muscle-cell growth as did riding slowly and steadily for up to two hours.

The same research group found in another study that HIIT burned fat more efficiently than did typical aerobics. They tracked two groups. One performed 20 weeks of conventional aerobics, and the other did 15 weeks of HIIT.

The first group burned more calories per workout session, but the second group incinerated an astounding *900% more fat*.

All of this makes good sense from an evolutionary perspective. High-intensity training tells your body that "survival in this environment requires extraordinary speed and strength." (Your body doesn't believe you are crazy enough to work this hard otherwise). It responds by marshaling metabolically "expensive" muscle-building and fat burning mechanisms to make you a lean, mean survival machine.

Conversely, slow jogs or swims lack urgency. Loathe to waste energy on dramatic changes, your body assumes that partial adaptation will do. Result: Months of workouts slide by, and progress remains nearly undetectable.

SO IS HIIT FOR YOU?

That depends. While it delivers faster benefits, it requires a certain mental toughness that some people just can't muster.

If you're in that group, keep taking

long walks, leisurely bike rides, and placid swims. These are far better than doing nothing. For those who have the time, these can build a strong conditioning foundation.

Another important caveat — HIIT can hurt you. Anyone with any reason to suspect susceptibility to heart attack should remain well below the "8 on a scale of 1–10" territory.

But for me personally, HIIT has been a revelation. I was a serious runner for many years, dutifully logging up to 50 miles a week, yet the spare tire hung on stubbornly.

So for the last five years or so, I've been doing HIIT and mixing up the activity. When running, I alternate between block-long sprints and rests.

When biking, it's one minute flat-out and then 15 seconds easy, for a quick 4 miles to my office.

But swimming according to an HIIT regime has been the most satisfying of all. Where I once cranked out a steady, moderate-paced, mind-numbing half mile, these days I do a series of six laps of our small pool at maximum speed and then 30 seconds of rest.

The last half of the sixth lap is utterly brutal, but I keep in mind that it will be over soon! And not only do I stop after six laps, but I actually exit the pool, soak up the sun for 30 seconds and then hop in and go again.

A workout consisting of six six-lap sessions and five quick rests takes no more than 20 minutes and leaves me pleasantly exhausted. I'm glad to report the spare tire is long gone.

You need not do HIIT exclusively. Long walks and placid swims are still part of my life and a nice counterpoint to HIIT's intensity.

But try it at least a couple of times a week. It could be just what you need to put you on the path to being trim and toned.

The Lazy Person's Guide to Exercise

Spend Less Time Working out by Increasing the Intensity

Resistance and aerobic training are both powerful ways to improve your biology, and each gives a unique set of benefits. Why not combine them?

High-intensity interval training (HIIT) alternates between brief, strenuous exercise and active rest. You might sprint for 60 seconds, walk for 30, do pushups for 60, walk for 30, and so on.

HIIT intensely stresses your muscles and then it lets them recover during active rest. Stringing exercises together and maintaining active rest keeps your heart and breathing rates up, so you also get the benefits of aerobic exercise. It's the happy marriage of two schools of fitness thought. In fact, it may be more effective than either resistance or aerobic exercise alone.

The icing on the cake is that HIIT is efficient. There's no need for an hour in the weight room and another hour running; you'll be lucky if you make it past 15 minutes of HIIT when you start out.

When you're designing an HIIT workout, there are some things to keep in mind:

1. Alternate between an exercise and active rest
2. Don't string together exercises that target the same muscle group. For example, don't follow squats with lunges. Both target your

quads, and you don't want to tire your quads out and then tax them again immediately afterward. A good method is to alternate between upper- and lower- body exercises
3. Set a timer instead of counting reps. Keep your phone at your side or an eye on the clock
4. Keep good form! HIIT gets exhausting quickly. Exhaustion brings poor form, and poor form brings injury. If your form starts to slip, slow down or skip an exercise and do active rest instead. Listen to your body to avoid hurting yourself.

Here's a model HIIT workout to get you started. It doesn't require equipment, and you can do it just about anywhere. If you're unsure what any of these exercises involves, go to this site to see what good form looks like. Alternatively, just type the exercise into the search bar on YouTube. There will be plenty of video tutorials.

Do each exercise for 60 seconds, and in between do active rest (walk in place) for 30 seconds:

- Jog in place
- Walk in place
- Bodyweight squats
- Walk in place
- Pushups
- Walk in place
- Jumping jacks
- Walk in place
- Situps
- Walk in place
- Burpees
- Walk in place.

If once through isn't enough, repeat the workout until you're spent.

You can also try a Tabata-style workout. Tabata workouts (named after their creator, Dr. Izumi Tabata, who used them in his research to great effect) follow a basic structure: Choose an exercise and do eight rounds of going all out for 20 seconds and resting for 10. For example:

- Burpees (20 seconds)
- Rest (10 seconds)
- Repeat 7 more times.

Each exercise in a Tabata workout takes only four minutes. It's harder than it sounds. Happy HIIT-ing!

The Uncomfortable Truth About Cardio

When It Comes to Burning Fat, It's Not All It's Cracked Up to Be

Running (truthfully, jogging) has been my exercise of choice since I was 20.

It seemed to keep the bulges at bay for a couple of decades, but as age 50 approached, roughly 25 pounds of *avoirdupois* had formed a "muffin top" cantilevered over my ever-tighter jeans.

How could this happen? I was gritting it out, still jogging daily, even in 100-degree Phoenix heat. I am a pretty disciplined guy about eating, too — no sodas and little to no sugar, refined carbs, or grains in general.

So I kicked it into higher gear and trained for and completed multiple half-marathons. This trimmed the overhang a bit, but post-race, the weight always came roaring back and then some.

It was almost as if the jogging was making me fatter.

As it turns out, recent research reveals that it wasn't my imagination. Sustained, moderate-intensity aerobic exercise — popularly termed "cardio" — trains our bodies to accumulate fat, particularly as we get older.

How?

First, the body acclimates to these sustained levels of aerobic exercise and becomes ever more efficient at fueling them, leaving us two unpalatable choices:

- Continually boost duration/intensity
- Eat progressively less to maintain the same muscle-to-fat ratio.

It's especially cruel because cardio has been definitively shown to increase appetite. In fact, studies show that people eat about *100 calories more than the calories they burn* through cardio workouts.

Adding to the problem, the body naturally loses muscle mass over time — 5–7 pounds per decade after about age 20, accelerating to roughly 10 pounds in the span from ages 60–70.

Since muscles, even at rest, burn roughly three times the calories that fatty tissue does, losing muscle reduces your 24/7 metabolic rate.

Result: Those unburned calories hang around as fat, particularly belly fat.

Cardio doesn't help much, because it can further reduce muscle size

and density beyond natural age-related losses by scavenging muscles for fuel sources. If you doubt this, Google photos of marathon runners — their toothpick arms reveal shockingly little muscle mass.

What we want to do is *increase* muscle mass, and, therefore, metabolic activity, burning away the annoying middle-age spread day in and day out, even when we rest.

Turns out that weight training is the best way to do that.

A long-term study of healthy middle-aged men who ranged from thin to overweight looked at the effects of weight training versus cardio on abdominal fat and muscle mass.

Researchers at the Harvard School of Public Health found that 20 minutes of weight training was superior to 20 minutes of moderate-to-vigorous cardio in reducing abdominal fat. It also showed increased muscle mass in the weight-training group was a key factor in keeping their base metabolic rate up and the fat at bay.

Now, running has its place — particularly high-intensity versions like sprints and intervals, which appear to "turn on" the protein synthesis that builds muscles, similar to weight training. This explains why champion sprinters sport muscular arms and shoulders, even though their workouts may include little to no weightlifting.

So is long, moderate cardio useless? Not at all. Especially if you are new to exercise and overweight, this kind of exercise can help you lose fat — until the body becomes efficient at fueling your efforts.

But if you've been around the block a few times, the best way to drop fat and keep it off is to emphasize the kind of exercise that maximizes muscular size and strength.

Consequently, I'm in the gym circuit training at least five times a week in the winter. I switch to serious high-intensity interval swimming in summer. I throw in some long bike rides (which can build serious muscle — check a pro cyclist's quadriceps) to round out the week.

I jog perhaps once every two weeks, just to keep loose, but when I get busy, it's the first activity I jettison.

So far, the muffin top remains at bay.

Extend Your Life in 75 Minutes

Even Just a Little Exercise Per Week Can Add Years to Your Life

If you have not noticed it yet, I'm a tad obsessive.

At age 60, I put in a hard hour in the gym at least five times a week. I also run and bike (in Arizona heat, no less) like a madman and swim sprint laps at least once a week as well.

In all, in the average week, I put in at least a solid seven hours of serious exercise. It's a mix of weightlifting and high-intensity interval training, with just a smattering of slow-pace cardio.

For me, it's worth it. As I've stated elsewhere, exercise in and of itself isn't much help when it comes to weight loss, but the other good effects of hard workouts are legion: more muscle mass, better insulin sensitivity, reduced risk of cancer and cardiovascular disease, even improved mood.

However…

You, unlike me, may have a life… one that precludes working out so often for so long.

Or you may have chronic pain or another health condition that makes such intense exercise simply impossible.

Whatever the reason, hey, I don't judge. I recognize that plenty of hard-working, responsible, worthwhile people either can't or won't put in the workout hours that I do.

If you are one of them, here's some good news.

In April of this year, a careful analysis of six studies — including data on over 660,000 adults in the U.S. and Europe — showed that even a little exercise is far better than none when it comes to extending life.

The researchers from the National Cancer Institute in Bethesda, Maryland, took as their benchmark the 2008 Physical Activity Guidelines for Americans (PAGA).

It calls for 2½ hours of moderate, or 75 minutes of vigorous, exercise per week.

Their analysis made it clear: Even people who did considerably less than the volume and/or intensity of exercise recommended in PAGA were 20 percent less likely to die during the course of studies, as opposed to folks who spent no time specifically devoted to exercise at all.

The amount of activity that gave them this benefit would add up to just an hour of brisk walking or a half-hour of jogging or biking per week.

Now, it's certainly worth noting that those who met the PAGA guidelines were 31 percent less likely to die during the study period.

And those maniacs who *doubled or tripled it?* They were 37 percent less likely to die.

So more is better. The lowered death rate maxed out at triple the PAGA

recommendation, but working out even more than that (as, for example, pro athletes do) yields additional benefits, such as increased strength and endurance.

But I find the results regarding modest exercise highly encouraging.

This study makes it clear that the majority of the benefit of exercise happens quickly, with just a minimum of effort.

Bottom line: In many areas of life, a little isn't much better than none… but exercise appears to be a happy exception.

Become an Unbeatable Man — at Any Age

Four Health Tips to Live Longer, Boost Strength, and Increase Resilience

These "men's tips" all apply to many women, too. But ignoring the gender-specificity of general trends serves no one. Everyone has the capacity for competitiveness; men tend to have more. Both genders can benefit from fasting, but women are more likely to have negative responses. Men and women both need sleep; lack of it hits women harder. That's all. As always, if you recognize yourself in these tips, go for it!

1. SKIP A MEAL EVERY NOW AND THEN

Women have a lower tolerance for meal skipping. Men have a better chance of thriving on it. I suspect they should try. A good rubric is "Eat as infrequently as you can without negative effects." If you can eat twice a day without getting irritable, experiencing metabolic slowdown or fat gain, or feeling stressed, eat twice a day. The longer you can go in between meals, the better you'll get at burning fat and, I'd predict, the longer you'll live.

2. MIND YOUR IRON

Excess iron is inflammatory and a potential oxidant, and male bodies have no system for shedding it. If we want to limit iron, we either have to bleed, destroy our red blood cells with lots of exercise, or reduce our absorption of it. Studies indicate that a modest reduction of iron is a smart health strategy for most men who want to live long and well and enjoy better insulin sensitivity. Here's how you can do that:

- Intense exercise reduces iron stores

- Dietary polyphenols in colorful fruits and vegetables, tea, coffee, and red wine all reduce iron absorption. Pretty much any of those healthy "superfoods" we hear about have iron-chelating properties. I'm talking about curcumin (from turmeric), quercetin (from apples, onions, and many other plant foods), grapes, and the colorful spices and herbs and plants
- Dairy, especially its calcium, may reduce iron absorption
- Giving blood reduces iron (hey, maybe bloodletting worked!). Shoot for a 40–60 range, as drops in insulin sensitivity have been seen at slightly higher levels.

Don't get crazy about it, now. You still need iron. Be sure to get a full blood count to confirm you actually need to do anything. But keep it in mind, especially as you age.

3. LIFT YOUR IRON

Everyone — man, woman, teen, senior — needs to lift heavy things, if only for health and fitness reasons. But there's also another component: aesthetics. The "ideal" male physiques (and there are many) depend heavily on strength training. You don't have to be a bodybuilder or squat heavy or even use weights at all. You do have to manipulate weight in the face of gravity on a regular basis, though, even if it's your own. Being and looking strong helps you make your way through life, get out of sticky situations, boost confidence, and be better at everything.

4. INJECT INTERMITTENT INTENSITY

Whether it's running sprints once or twice a week, going really hard in the weight room, climbing a tree until your heart pounds against your breastbone, going bouldering, approaching the beautiful woman, starting that business you've always dreamed about, surfing a big wave, or practicing holding your breath underwater, there are real benefits to punctuating your comfortable life with intermittent bouts of physical, mental, and psychological intensity.

Even though most of us no longer have to practice these behaviors for sustenance and survival, learning a martial art or hunting may also be worthy pursuits that inject intensity.

Put something on the line. Get a little scared. Get uncomfortable.

The Single Best Supplement to Increase Your Performance in the Gym

Sprint Quicker, Build Muscle Faster and Improve Anaerobic Endurance with this Scientifically Proven Molecule

There are good reasons why creatine is such an extremely popular supplement.

Studies show that it can increase muscle mass, strength and exercise performance while also offering other health benefits, such as protecting against neurological disease.

Many people believe that creatine is unsafe and has lots of side effects, but they are not supported by evidence.

In fact, there have been several hundred studies investigating creatine's effects, with over 70 percent showing a positive effect. These range from reducing the time needed to complete sprints — whether biking, swimming or running — to increasing the amount of weight and number of reps for key lifts in the gym.

The other 30 percent of studies showed a small or insignificant effect. No negative effects have been found.

HOW DOES IT WORK?

Creatine's main role is to enhance energy production in cells, and to understand how this works, you need to know something about how your cells produce energy.

The most basic form of energy in cells is a molecule called adenosine triphosphate (ATP). This is the "energy currency" your cells use to perform many of their functions. However, ATP is a limiting factor in high-intensity exercise because it runs out quickly when you are working hard.

Which brings us back to creatine. About 95 percent of the body's creatine is stored in your muscles, in the form of a molecule called creatine phosphate.Creatine phosphate can help you replenish the "energy currency" ATP, giving your muscle cells the capacity to produce more energy.

So the more creatine you have, the more energy your muscle cells can produce during high-intensity exercise. This leads to enhanced performance. And although creatine's primary benefits are enhanced energy production, it can also increase strength and help you gain muscle.

HOW TO SUPPLEMENT WITH CREATINE

There are several forms of creatine available, some of which are marketed with bold claims that are unsupported by research. But the most studied and proven form is creatine monohydrate.

Depending on you and your current levels, supplementing with creatine can increase muscle creatine stores by 10–40 percent. If you have low stores, you may see even more noticeable improvements.

A loading protocol is the fastest way to maximize muscle creatine stores. It involves taking a high dose for a few days and then a lower maintenance dose after that.

This usually means 20–25 grams of creatine per day, split in 5-gram doses, for five–seven days. This is then followed with a maintenance dose of 3–5 grams per day. As creatine pulls water into the muscle cells, it is advisable to take it with a glass of water and stay well hydrated throughout the day.

Some research has shown that creatine absorption may be improved with protein or carbs, so taking it with a meal may be best.

At the end of the day, creatine is one of the cheapest, most effective and safest supplements you can take.

Get Up Off That Butt!

Why Sitting Too Much Is Seriously Bad for Your Health

Modern society has been engineered for sitting. As a result, humans spend more time off their feet than ever before. However, recent studies show that all this sitting is doing much more harm than anyone thought.

PEOPLE ARE SITTING MORE THAN EVER BEFORE

The idea that sitting can be harmful seems ridiculous at first thought.

Sitting is a default human body posture, and when people work, socialize, study or travel, they often do so in a seated position. It's second nature. However, that doesn't mean sitting is harmless. It's like eating — necessary, yet incredibly harmful if you do too much of it.

Unfortunately, sedentary behavior, or sitting too much, is now at an all-time high. Over half of the average person's day is spent sitting, doing things like driving, working at a desk or watching television.

In fact, the typical office worker may spend up to a whopping 15 hours per day sitting.

SITTING LIMITS THE AMOUNT OF CALORIES YOU BURN

Your everyday nonexercise activities, like standing, walking and even fidgeting, still burn calories.

This energy expenditure is known as nonexercise activity thermogenesis (NEAT), the lack of which is an important risk factor for weight gain. Sedentary behavior, like sitting or lying down, involves very little energy expenditure. It severely limits the calories you burn through NEAT.

To put this in perspective, studies report that agricultural workers can burn up to 1,000 more calories per day than people working desk jobs, because farm workers spend most of their time walking and standing, rather than sitting in a chair.

THE LONGER YOU SIT, THE FATTER YOU GET

When it comes to weight management, the fewer calories you burn, the more likely you are to gain weight. This is why sedentary behavior is so closely linked to obesity.

In fact, research shows that obese individuals sit for an average of two hours longer each day than lean people do.

This is bad news, because sitting is linked to early death.

Observational data from over 1 million people show that the more sedentary you are, the more likely you are to die early. In fact, the most sedentary people had a 22–49% greater risk of early death.

SEDENTARY BEHAVIOR IS LINKED TO DISEASE

Sedentary behavior is consistently linked to more than 30 chronic diseases and conditions.

This includes a 112% increase in the risk of Type 2 diabetes and a 147% increase in heart disease risk.

Insulin resistance — a key driver of Type 2 diabetes — has been a particular area of interest for those researching sedentary behavior.

Studies have shown that walking fewer than 1,500 steps per day or sitting for long periods without reducing calorie intake can cause a major increase in insulin resistance.

Researchers believe that being sedentary has a direct effect on insulin resistance, and this can happen in as little as one day.

EXERCISE DOESN'T COMPLETELY ELIMINATE THE RISK

While regular exercise is always recommended, it can't completely offset all the health risks of sitting too much.

One study tested this theory by measuring metabolic markers in 18 people following different exercise protocols. When the entire day is spent sitting, one hour of intense exercise cannot make up for the negative effects of inactivity.

Additionally, a recent review of 47 studies found that prolonged sitting was strongly linked to negative health outcomes, regardless of exercise levels.

As expected, the negative effects were even greater for people who rarely exercised.

DESIGNING A CHAIR-BASED WORLD WAS A MISTAKE

Modern humans spend a lot of time sitting and are only now beginning to realize how bad it is for health.

That's not to say you should never sit down and relax, just that you should try to minimize the time you spend sitting during the workday.

Minimizing sedentary time is just as important for health as a nutritious diet and regular exercise. Exercising for 60 minutes a day, so that you can sit or lie down for the other 23 hours, is not going to cut it.

You can't outrun a bad diet, and you can't out-exercise a sedentary lifestyle.

Lightning-Fast Fat Loss:

Turbocharge Your Fat-Burning 900% With This Cutting-Edge Fitness Technique

WHY WORK OUT FOR HOURS WHEN MINUTES WILL DO?

Almost 20 years ago, while most fitness-minded Americans were dutifully grinding out hours of mind-numbing aerobic exercise, a researcher named Dr. Izumi Tabata quietly published some intriguing experimental results based on an unusual training regimen of the Japanese speed skating team.

The head coach wanted to see, in real numbers, just how effective his training was. The results were so startling, they created a sensation in the word of fitness research. "Although Coach Irisawa pioneered the idea,

somehow it became named after me," Dr. Tabata wryly observed.

Thus, the Tabata Protocol was born.

Dr. Tabata discovered that working out for mere minutes, but at a more intense level, could be more beneficial than spending hours at the gym.

According to a study published in *The Journal of Physiology, Dr. Tabata* was on to something: 16 healthy young men were split into two groups. The first group performed four–six 30-second bursts of exercise (with four minutes of recovery between their efforts). The second slogged it out for 90–120 minutes of steady, moderate exertion on an exercise bike gizmo.

At the end of two weeks, the high-intensity group had exercised for about 2½ hours total, including the recovery periods. The slow-and steady group had logged over 10 hours.

When muscle biopsies were performed to measure the results of the training, the conclusion was nothing short of revolutionary. The stationary bikers were wasting their time (or, more accurately, about 75% of it). Why? Because the skeletal muscle adaptations and exercise performance between the groups were virtually identical.

It sounds impossible, but all of this makes good sense from an evolutionary perspective. High-intensity training tells your body that survival in this environment requires extraordinary speed and strength. (Your body doesn't believe you are crazy enough to work this hard otherwise.) It responds by marshaling metabolically "expensive" muscle-building and fat-burning mechanisms to make you a lean, mean survival machine.

Conversely, slow jogs or swims lack urgency. Loathe to waste energy on dramatic changes, your body assumes that partial adaptation will do. Result: Months of workouts slide by and progress remains nearly undetectable.

The take-home point for you is don't bother horsewhipping yourself on a bike, treadmill, or running path for hours on end. Instead of wasting months training for a marathon, train for just a few minutes and bank the rest of that time doing… well, whatever you'd like!

There's even more compelling research on the merits of workouts that are short in duration but high in intensity. Incredibly, even a three-minute workout can have the same benefit as one lasting 90 minutes–two hours.

The science also shows this form of training is, bar none, the best for burning fat.

A University of Virginia study tested volunteers in three groups: One sat on its collective duff the entire time. The second performed long, slow

aerobic exercise. And the third performed more intense exercise with a shorter duration

One (and only one) group managed to burn away significant amounts of belly fat. It wasn't the couch potatoes, and it wasn't those doing typical aerobics. Once again, the shorter, more intense workouts reigned supreme.

Another interesting result: The metabolic rate of the low-intensity exercisers actually went down during the study. The more intense exercisers achieved faster metabolisms.

But you didn't just fall off the radicchio truck. You're looking for the catch.

Indeed, there is one.

As one researcher put it, you must commit to spending most of that brief high-exertion interval at an "8 or above" on a 1–10 intensity scale.

In other words—and excuse the vernacular—you need to seriously bust ass.

This sort of exercise is known as high-intensity interval training, or HIIT. It has long been known to serious athletes but is now finally entering the mainstream.

The same research group that did the study above found in another that HIIT burned fat more efficiently than did typical aerobics. They tracked two groups. One performed 20 weeks of conventional aerobics, and the other did 15 weeks of HIIT.

The first group burned more calories per workout session, ***but the second group incinerated an astounding 900% more fat.***

So why isn't this form of fitness more popular?

Other than the requisite ass-busting (this really does need to be emphasized), many people are turned off because they've been lulled into chasing something called the "fat-burning zone" when they exercise.

Perhaps you've seen this seductive term on a poster near the treadmills at the gym. The poster may also feature a fancy-colored graph marking off certain percentages of maximum heart rate.

The idea is simple (and, as you'll soon discover, rather misleading): Keep your heart rate, and intensity, within 55–65% of maximum and you'll burn fat at maximum efficiency during your workout.

Sounds fantastic! But there are two major flaws:

1. While exercising at a lower, more comfortable intensity for a longer duration will burn a greater percentage of fat, the total amount is still miniscule. Higher-intensity workouts burn more total cal-

ories, including after you're finished. This is in contrast to your typical boring, endless cardio, which only seems to increase your appetite after you're done. This means, all things being equal, more fat will disappear from your body.

2. Higher-intensity workouts boost the release of human growth hormone (HGH), which acts like a youth serum in your body, firming muscles, tightening skin, increasing energy, improving sleep… and carving away fat. Low-intensity exercise causes little or no release of HGH.

This second point was confirmed by Dr. Christopher Scott at the University of Southern Maine. He examined the differences between steady cycling and 15-minute sprints and found the sprinters burned 95% of their calories *after the exercise was over.*

Bottom line: Slashing the time and pumping up the intensity can give you dramatically better exercise results.

SO IS HIIT FOR YOU?

That depends. While it delivers faster benefits, it requires a certain mental toughness that some people just can't muster.

If you're in that group, keep taking long walks, leisurely bike rides, and placid swims. These are far better than doing nothing. For those who have the time, these can build a strong conditioning foundation.

Another important caveat—HIIT can hurt you. Anyone with any reason to suspect susceptibility to heart attack should remain well below the "8 on a scale of 1–10" territory.

But for me personally, HIIT has been a revelation. I was a serious runner for many years, dutifully logging up to 50 miles a week, yet the spare tire hung on stubbornly.

So for the last five years or so, I've been doing HIIT and mixing up the activity. When running, I alternate between block-long sprints and rests. When biking, it's one minute flat-out and then 15 seconds easy, for a quick four miles to my office.

But swimming according to an HIIT regime has been the most satisfying of all. Where I once cranked out a steady, moderate-paced, mind-numbing half mile, these days I do a series of six laps of our small pool at maximum speed and then 30 seconds of rest.

The last half of the sixth lap is utterly brutal, but I keep in mind that it

will be over soon! And not only do I stop after six laps, but I actually exit the pool, soak up the sun for 30 seconds, and then hop in and go again.

A workout consisting of six six-lap sessions and five quick rests takes no more than 20 minutes and leaves me pleasantly exhausted. I'm glad to report the spare tire is long gone.

You need not do HIIT exclusively. Long walks and placid swims are still part of my life and a nice counterpoint to HIIT's intensity.

But try it at least a couple of times a week. Trim and toned, you and I can then return to our sedentary jobs guilt-free (though I have a stand-up desk, so I am not a total slug at work—standing burns twice as many calories as sitting).

STEPS TO FREEDOM

1. Resolve to make HIIT a part of your life, even if it seems strange and you're nervous about doing so. It might help your motivation to review all the fat-burning and health benefits:

    - You can finish the workout almost 10 times faster than you can with regular cardio but get better fat-burning results
    - It increases your fat burning for the rest of the day
    - It increases your youth-associated hormones like HGH
    - It releases endorphins, which give you a "feel good" sensation to enjoy after your workout is over
    - It makes any of your other workouts more efficient for burning fat
    - It simultaneously molds muscle and increases heart health.

2. Break into HIIT gently if you're not experienced. It's counterintuitive, but tougher forms of HIIT like running uphill or carrying extra weights can be safer, because your speed will go down.

Learn to appreciate the challenge. Remember, the benefits of HIIT come specifically from how tough it is. So there's no "getting around" the hard workout aspect of it. You're just going to have to learn to love it, which will get surprisingly easy when you see the results in the mirror and relish how fantastic you feel after you're done.

Plus, remember: These workouts are short, and you must have at least

a two-day break between them. With HIIT, you can put to rest the idea of slogging it out on the treadmill or pounding the pavement every day. Instead, you'll be burning fat 900% more efficiently. Use the free time to enjoy your new body!

The Superior Fat-Burning Activity

Running (truthfully, jogging) has been my exercise of choice since I was 20.

It seemed to keep the bulges at bay for a couple of decades, but as age 50 approached, roughly 25 pounds of avoirdupois had formed a "muffin top" cantilevered over my ever-tighter jeans.

How could this happen? I was gritting it out, still jogging daily, even in 100 degree Phoenix heat. I am a pretty disciplined guy about eating—no sodas, and little to no sugar, refined carbs, or grains in general.

So I kicked it into higher gear and trained for and completed multiple half-marathons. This trimmed the overhang a bit, but post-race, the weight always came roaring back and then some.

It was almost as if the jogging was making me fatter.

As it turns out, recent research reveals that it wasn't my imagination. Sustained,moderate-intensity aerobic exercise—popularly termed "cardio"—trains our bodies to accumulate fat, particularly as we get older.

How?

First, the body acclimates to these sustained levels of aerobic exercise and becomes ever more efficient at fueling them, leaving us two unpalatable choices:

- Continually boost duration/intensity
- Eat progressively less to maintain the same muscle-to-fat ratio.

It's especially cruel, because cardio has been definitively shown to increase appetite. Worse, studies show that people tend to want to eat about 100 calories more than the extra calories they burn through cardio workouts.

Adding to the problem, the body naturally loses muscle mass over time—5–7 pounds per decade after about age 20, accelerating to roughly 10 pounds in the span from ages 60–70. Since muscles, even at rest, burn roughly three times the calories that fatty tissue does, losing muscle reduces your 24/7 metabolic rate.

Result: Those unburned calories hang around as fat, particularly belly fat.

Cardio doesn't help much, because it can further reduce muscle size and density beyond natural age-related losses by scavenging muscles for

fuel sources. If you doubt this, Google photos of marathon runners — their toothpick arms reveal shockingly little muscle mass.

What we want to do is increase muscle mass, and therefore metabolic activity, burning away the annoying middle-age spread day in and day out, even when we rest.

Turns out that weight training is the best way to do that.

A long-term study of healthy, middle-aged men who ranged from thin to overweight looked at the effects of weight training versus cardio on abdominal fat and muscle mass.

Researchers at the Harvard School of Public Health found that 20 minutes of weight training was superior to 20 minutes of moderate-to-vigorous cardio in reducing abdominal fat. It also showed increased muscle mass in the weight-training group was a key factor in keeping their base metabolic rate up and the fat at bay.

Now, running has its place—particularly high-intensity versions like sprints and intervals, which appear to "turn on" the protein synthesis that builds muscles, similar to weight training. This explains why champion sprinters sport muscular arms and shoulders, even though their workouts may include little to no weight lifting.

So is long, moderate cardio useless? Not at all. Especially if you are new to exercise and overweight, this kind of exercise can help you lose fat—until the body becomes efficient at fueling your efforts But if you've been around the block a few times, the best way to drop fat and keep it off is to emphasize the kind of exercise that maximizes muscular size and strength.

Consequently, I'm in the gym circuit training at least five times a week in the winter. I switch to serious high-intensity interval swimming in summer. I throw in some long bike rides (which can build serious muscle—check a pro-cyclist's quadriceps) to round out the week.

I jog perhaps once every two weeks, just to keep loose, but when I get busy, it's the first activity I jettison.

So far, the muffin top remains at bay.

Get The Best Body Of Your Life

Age should not be an excuse for you to look less than your best.

Just look at Don Wildman. Don's physical fitness will blow your mind.

He's competed in nine Hawaii Ironman triathlons, surfed 20-foot waves with Laird Hamilton (the world's most famous surfer) and snowboarded the backcountry of Alaska with Olympian Tommy Moe.

He's even humiliated John McEnroe in cycling races across America.

John's the tennis star who screamed and stomped his way to seven grand-slam championships before becoming a hardcore mountain biker and fitness enthusiast.

And Don did all of this after the age of 51. Heck, he didn't do most of it until he was over 60.

That's probably why Esquire magazine voted him "the world's healthiest 75-year-old man" back in 2008.

Don's always said the key to living young is never to stop moving. But we've got a few other tricks up our sleeve to make sure that you stay at your best level of fitness, even as you age.

THE ONE-MINUTE ENERGY TRICK

An early morning workout is said to be a great energy boost — it gets your blood and adrenaline pumping, as well as a rush of feel-good endorphins to get your day started on a natural high.

But let's be honest — not everyone has time to go to the gym, get a workout in, shower and get ready for the day before getting to work. And even if they do, that takes a lot of motivation.

That's why we turned to one of the busiest men we know to try to give us some insight into how he stays fit and has so much energy.

Turns out, it only takes one minute of his time.

It was just after a Brazilian Jiu Jitsu class at Mark's private studio where I learned his one-minute trick.

If you don't know Mark Ford, he's a best-selling author and serial entrepreneur known for his ability to repeatedly start 7-figure businesses in seven years or less.

And he's kept himself fit, and received a black belt in Brazilian Jiu Jitsu despite his rigorous schedule.

Even in his 60s, Mark can outwrestle men half his age.

I'm a volleyball player. You'd think because of my long history of sports, staying in shape would be easy. But each time I get injured, I find myself falling in a familiar place of saying "tomorrow" when it comes to workouts.

Thankfully, Mark had a solution.

It helped me drop 6 lbs and rank #57 on the USA Beach Volleyball Rankings in 2014.

His secret?

"Diana," he said. "It's not easy to get back in the habit of working out. I

remember realizing one day a few years ago that I was getting out of shape. And I couldn't motivate myself to get started again. So I told myself I had to do just one. Just one of everything.

The next morning I did just one pushup, one situp and one squat.

It wasn't hard. It only took seconds. But once I did one pushup, I couldn't just do one.

I'd do 10 or 15, even 50.

And it never took more than a few minutes.

Mark's not the only who's discovered the power of ridiculously small steps in the pursuit of greatness.

There are many variations of this idea. Dr. Oz, who Oprah has declared "America's Doctor," has a great "one-minute energy booster." You can find it easily online.

The path to a better, healthier, more fit you doesn't have to be a long one. One motivational speaker, Margaret Lukens, has discovered the real secret to changing habits.

When it comes to creating new habits, she explains, always "make them so small they seem trivial."

Put simply, all you have to do is start extremely small. The more absurdly small, the better.

A one-minute workout definitely fits in with that advice.

BREATHE EASY TRICK

Meditation is one of the most ancient healing practices in the world. Even though it's old-school, it hasn't lost its touch.

Recent studies examining the benefits of meditation are astounding. Physicians are now prescribing meditation for everything from chronic pain to insomnia. In an article for the *Wall Street Journal,* Dr. Doraiswamy, a professor of psychiatry at Duke University Medical Center, explains that although research does not clearly outline how meditation works on the body, it has been found to have many benefits.

Most particularly, it has been found to "activate the parasympathetic nervous system, which stimulates the body's relaxation response, improves blood supply, slows down heart rate and breathing, and increases digestive activity."

Astoundingly, meditation can also affect the length of your telomeres.

A study in the *International Journal of Geriatric Psychiatry* reported that they divided a group of 40 family caregivers of dementia patients into two

groups. One half of the participants meditated every day, while the other half listened to relaxing music.

At the end of eight weeks, the group that meditated showed a 43% improvement in telomerase activity. The group listening to music only improved by 3.7%.

Meditation is extremely beneficial, even if it's only done for a short period of time.

In fact, one minute is all you need!

Kundalini yoga experts recommend doing a focused, meditative breathing exercise for one minute per day. Inhale for 20 seconds, hold your breath for 20 seconds, and then exhale for 20 seconds to complete the cycle.

Make sure that you are relaxed while doing so, and very focused on your breath. You can do several repetitions once you have worked up to it, to improve your experience.

Before long, you'll see and feel the benefits.

WHY WORK OUT FOR HOURS, WHEN MINUTES WILL DO?

We all want a better metabolism, and to be in better shape.

Unfortunately, with each year that goes by, it seems like that goal becomes harder to accomplish. You used to be able to go on a leisurely run a few times a month, and still feel pretty fit.

As we age, it's like our bodies' reaction times slow down. Hours trudging away on a treadmill, and months spent sticking to unfulfilling diets don't seem to get that ring of fat to leave our bellies.

Luckily, in 1996 a Japanese doctor discovered that working out less, but at a more intense level, could be more beneficial for you than spending hours at the gym.

Instead of wasting months training for a marathon, train for just a few minutes and bank the rest of that time on your couch.

There's been a lot of compelling research lately on the merits of workouts that are short in duration but high in intensity. Incredibly, even a three-minute workout can have the same benefit as one lasting 90 minutes to two hours.

But you didn't just fall off the radicchio truck. You're looking for the catch.

Indeed, there is one.

As one researcher put it, you must commit to spending most of that

brief interval at an "8 or above" on a 1–10 intensity scale.

In other words — and excuse the vernacular — you need to seriously bust ass.

This sort of exercise is known as high-intensity interval training, or HIIT. It has long been known to serious athletes, but is now finally entering the mainstream.

A study at Canada's McMaster University found that six 30-second sprints on a stationary bike, each followed by just a few seconds of rest, led to the same level of muscle-cell growth as did riding slowly and steadily for up to two hours.

The same research group found in another study that HIIT burned fat more efficiently than did typical aerobics. They tracked two groups. One performed 20 weeks of conventional aerobics, and the other did 15 weeks of HIIT.

The first group burned more calories per workout session, but the second group incinerated an astounding 900% more fat.

All of this makes good sense from an evolutionary perspective. High-intensity training tells your body that "survival in this environment requires extraordinary speed and strength." (Your body doesn't believe you are crazy enough to work this hard otherwise.) It responds by marshaling metabolically "expensive" muscle-building and fat burning mechanisms to make you a lean, mean survival machine.

Conversely, slow jogs or swims lack urgency. Loathe to waste energy on dramatic changes, your body assumes that partial adaptation will do. Result: Months of workouts slide by, and progress remains nearly undetectable.

So is HIIT for you?

That depends. While it delivers faster benefits, it requires a certain mental toughness that some people just can't muster.

If you're in that group, keep taking long walks, leisurely bike rides and placid swims. These activities are far better than doing nothing. For those who have the time, these can build a strong conditioning foundation.

Another important caveat — HIIT can hurt you. Anyone with any reason to suspect susceptibility to heart attack should remain well below the "8 on a scale of 1–10" territory.

But for me personally, HIIT has been a revelation. I was a serious runner for many years, dutifully logging up to 50 miles a week, yet the spare tire hung on stubbornly.

So for the last five years or so, I've been doing HIIT and mixing up the activity. When running, I alternate between block-long sprints and rests. When biking, it's one minute flat-out and then 15 seconds easy, for a quick 4 miles to my office.

But swimming according to an HIIT regime has been the most satisfying of all. Where I once cranked out a steady, moderate-paced, mind-numbing half mile, these days I do a series of six laps of our small pool at maximum speed and then 30 seconds of rest.

The last half of the sixth lap is utterly brutal, but I keep in mind that it will be over soon! And not only do I stop after six laps, but I actually exit the pool, soak up the sun for 30 seconds and then hop in and go again.

A workout consisting of six six-lap sessions and five quick rests takes no more than 20 minutes and leaves me pleasantly exhausted. I'm glad to report the spare tire is long gone.

You need not do HIIT exclusively. Long walks and placid swims are still part of my life and a nice counterpoint to HIIT's intensity. But try it at least a couple of times a week.

THE MAGIC ELIXIR FOR THE GYM

This next trick is so easy, it will feel like cheating.

In fact, I'm willing to bet it's something you already do.

Before you hit the gym, go for a run, swim laps or compete — get caffeinated.

Studies on how caffeine affects performance have been published since 1978. A 2009 article in the *New York Times* called "It's Time to Make a Coffee Run" quoted one expert, Dr. Mark Tarnopolsky, saying that at this point it's absurd to question whether or not it is effective.

"There is so much data on this that it's unbelievable," he said. "It's just unequivocal that caffeine improves performance. It's been shown in well-respected labs in multiple places around the world."

By releasing the calcium our bodies store in muscle, caffeine increases power output by supporting strength and endurance. Dr. Tarnopolsky also says that caffeine diminishes the brain's sense of exhaustion.

In other words, it can trick your mind into thinking it's not tired. Your mind will no longer stand in the way of you and your highest performance.

Caffeine is a completely legal stimulant. Although some athletes feel that using it to boost their performance during competitive events would be cheating, there's absolutely no reason for them to avoid it. There are

no rules that say you can't have your morning dose of caffeine before a sporting event.

Caffeine, in its many forms, has also been shown to promote weight loss in both human and animal trials.

A study out of the Center for Human Nutrition at the University of California found that green tea, black tea and oolong tea all increased energy expenditure and fat oxidation in mice, leading to weight loss.

Another trial out of the New York Obesity Research Center at Columbia University observed the effects of an herbal caffeine supplement on 167 people. Again, caffeine promoted body weight and body fat reduction as well as improving blood lipids.

It's long been known that caffeine helps to maximize results for athletes. Studies have been performed on runners, cyclists, rowers, swimmers, tennis players… pretty much every type of athlete. So in 2009 researchers set out to find just how much caffeine you need to get those results. The answer? Not much.

According to the head of the sports nutrition department of the Australian Institute of Sport in Canberra, athletes can get all of the beneficial effects of caffeine from just one milligram per kilogram of body weight. For a 176-pound man, that would be 4 ounces of coffee.

While these promises can be exciting, it's important not to go overboard. The New York Times reported that "Terry Graham, chairman of the Department of Human Health and Nutritional Sciences of the University of Guelph in Canada, found that at 9 milligrams per kilogram, athletes actually did worse."

That means that too much caffeine can be detrimental.

Stick to drinking a cup of tea or coffee before your workout, and be amazed by how it could help maximize your results.

THE ONE EXERCISE TO AVOID ONCE YOU HIT 40

Step away from the sneakers. Recent studies have shown that long distance cardio and endurance exercises, such as marathons or long bike races, can be detrimental to your health.

According to a German study published in the Elsevier journal, cortisol is a vital steroid hormone involved in regulating essential bodily functions including metabolism and cytokine production. They tracked the cortisol levels of 395 participants by monitoring the levels of cortisol in hair follicles.

It is released in times of acute stress, when it serves to help the body deal with its current situation or threat. It is also released into the bloodstream during acute physical exercise.

Generally, this cortisol release is necessary to our survival. However, it was found in the study that "long-term alterations in cortisol release may have detrimental effects on health."

The amount of cortisol released is dependent on the intensity and duration of the exercise, but "it appears that especially prolonged aerobic exercise and endurance training induce the HPA axis to release abundant cortisol."

Over time, these elevated cortisol levels have been linked to both somatic and mental illnesses.

In the end, "endurance athletes exhibited hair cortisol levels that exceeded those of control subjects by 46%." Out of all the tracked athletes, marathon runners showed the maximal increase, with their cortisol levels 63% higher on average than control subjects.

Other studies have suggested that elevated cortisol levels in hair could be associated with developing an acute myocardial infarction, and marathon runners seem to be more likely to suffer from cardiac atherosclerosis.

Evidence also indicates that higher cortisol levels also might predispose people to diseases like diabetes, depression and metabolic syndrome.

One article on Mercola's Fitness website explains that "repeatedly and consistently overwhelming your heart by long distance marathon running, for example, can actually prematurely age your heart and make you more vulnerable to irregular heart rhythm. This is why you sometimes hear of seasoned endurance athletes dropping dead from cardiac arrest during a race."

By running a marathon, you may be putting yourself at a higher risk for disease.

So why does this get worse as you age? Generally, muscle mass begins to decline around the age of 40. As a result, marathons and other high endurance activities become more detrimental as you grow older.

When you hit 40, you are already losing muscle mass at a rate of 0.2% per year. Since long cardio also leads to increased muscle loss, the effects are compounded. After 40, you should stop all activities that might lead to muscle loss.

Now, don't take this as permission to sit on the couch. Exercise is absolutely vital at all ages. Focus on high-intensity intervals, strength training and stretching to make sure that you are maintaining your health.

Getting fit will keep you young. Just don't overdo it by placing unnecessary stress on your body.

THE HEART OF AN OLYMPIC SWIMMER WITHOUT THREE-HOUR-A-DAY WORKOUTS

I suspect you already know this, but researchers are now showing exercise could be the most powerful medicine there is when it comes to health and longevity. That's why older athletes often perform better than most young athletes. Research is finding that exercise can keep us young well into our 60s, 70s and beyond.

Just listen to the results of this heartening study published in 2011 in *Proceedings of the National Academy of Sciences*.

In the experiment, Dr. Tarnopolsky and his team selected mice whose mitochondria started malfunctioning at the human equivalent of age 20. Mitochondria are the power generators in each of our cells. They provide cells with fuel and give us the energy to go about our day. When these power plants break down, our cells die. Brains shrink, hair falls out, our muscles weaken and soon enough we look old.

And that's what happened in this study.

By the time the mice reached their 60s in human terms, they were extremely frail and decrepit, with enlarged hearts, shriveled gonads and patchy graying fur. Lifeless, they rarely moved about their cages.

All were dead within the year.

Except the mice that exercised.

What happened in the study is the mice were divided into two groups: One group was sedentary. The other group ran on treadmills three times per week for 45 minutes each time (a brisk 50-55 minute or 10 km run for humans). When the mice reached the equivalent of age 60 in humans, the sedentary mice were shells of their former selves.

But the mice who exercised showed dramatic results.

The PoIG-END female continued to look and act far younger than her anti-exercising counterpart.

And researchers believe exercise pays off similarly in humans…

As Dr. Tarnopolsky told the Hamilton Spectator, a local newspaper… "To see absolutely every tissue protected from something that is completely applicable to humans as long as they get their butt off the couch is quite something."

But here's what's even more amazing about this research

JUST 14 MINUTES A DAY...

There's a funny parody on YouTube of a personal trainer dressed up as one of his clients. The trainer pretends to go through several sessions without getting results… and blames the trainer while saying things like "I just had one glass of wine… okay I had three or four glasses of wine…" "Is this supposed to hurt this bad?" "I hate you… I hate you." It was a viral hit because it illustrated how we all feel about exercise.

It hurts.

That's why studies show it's important to get results immediately. Otherwise, what makes it worth doing?

So what's the best way to get the heart of an Olympic swimmer without working out for three hours (or more) a day?

Follow the training method popularized in Japan by Olympic athletes.

The man behind the program, Dr. Izumi Tabata, wanted to know if you would get more out of standard one-hour, moderate exercise five times a week for six weeks or out of his controversial four minutes, four times a week high intensity program?

The results?

It turns out that in just four minutes, you can essentially double your metabolic rate and keep it churning for hours afterwards.

How does it work?

You essentially pick an exercise and do it as intensely as you can for 20 seconds then rest 10 seconds and repeat eight times.

You do this four days a week and then one day a week relax and do forty five minutes of steady cardio at a pace you can maintain for the full 45 minutes.

That's the entire training program that increased the performance of Olympic athletes.

You might think it sounds too simple and too quick to payoff, but look what happened to university students who tried it on a stationary bike:

They did seven to eight 20-second, all-out sprints, each separated by just 10 seconds of rest.

Total time? Four minutes (Editor's note: All study participants started with a 10-minute warm-up).

The results were hard to believe. After six weeks, doing this five days a week, the students improved their fitness by 14%.

In contrast, students doing only steady, moderately paced cardio for 60 minutes five days a week increased their fitness by 10%.

Fourteen total minutes a day for a 14% increase…

Those are pretty remarkable results.

Simple Weight Loss Secrets

Losing weight is never easy.

But as we get older, those pounds seem to stick more and more stubbornly, in the places we least want them.

We've already given you some tools that will help with your weight loss in this book. You've discovered natural ways to boost your energy, and learned about the foods and drinks that kill it. You've also learned how to eliminate aches and pains — so that should no longer stand in your way of exercising.

In fact, you've also learned the best exercises you should be doing to help you lose weight — as well as which ones to avoid.

All of the information you've been given so far is the foundation for maintaining a healthy weight. But here are a few more tricks to help speed the process along.

THE SUPERMODEL CONDIMENT

It's not mayonnaise or ketchup.

A study done at Oxford Polytechnic Institute showed that this weird condiment could temporarily turn your body into a fat-burning furnace.

The secret is spicy foods. By eating hot spices, you speed up your metabolism, causing your body to burn extra calories. Researchers call this a "diet-induced thermic effect."

By adding 3 grams of chiles and 3 grams of hot mustard to their meals, the volunteers in the study increased their metabolism by 25%.

According to George Harris, the editor in chief of *American Health,* "What the Oxford researchers have discovered is that hot peppers raise the thermic effect 25% higher than the normal jump, about 45 calories per 700 (consumed). Now that`s not a huge effect and it`s not going to make us all become pepper dieters. But if you combine it with other healthy eating habits, you've got a major prospect."

The long-term effects have not been proven. Eventually, most people do build up a resistance to spicy foods, and might not see the same results.

But if you're not used to spicy food, and want to give your metabolism a little extra kick, adding some hot pepper sauce and hot mustard to your meal might just do the trick.

TEENAGE METABOLISM TRICK

Ah, the glories of being a teen. Remember the days when you could eat

whatever you wanted, and still maintain a killer body? All the pizza in the world, candy bars and afternoons spent on the couch couldn't touch your flat stomach and toned legs.

The worst part is, at the time most of us didn't even appreciate it. We thought our bodies would stay that way forever, blissfully ignoring the calories we ate.

Luckily, there's a way to trick your metabolism into thinking you're 16 again.

The secret lies in a food you'd never expect. Black beans.

It's all about cyanidin 3-glucoside — C3G for short. C3G affects the way your body handles the fat from your diet. Generally when you have a high-fat diet, the body stores it as — you guessed it — fat.

When you take C3G, it causes your genes to metabolize the fat rather than storing it. Just by eating C3G, you can trick your body into burning the fat you eat. It does this by up-regulating the gene expression for fat burning, and down-regulating the gene expression for fat storage.

C3G is found in dark pigment, like those found in black beans and black rice.

A 2011 article published in the journal *BMC Proceedings* (BioMed Central) found C3G to have a "protective effect against obesity," and that "some studies indicated that Cy-3-G from black beans may be beneficial for the improvement of obesity and Type 2 diabetes."

Adding black beans and black rice to your diet will kickstart your metabolism and help trick your body into burning, not storing, the fat that you ingest.

The Better Path to Strong Bones

The Two Variables That Matter Far More Than Calcium

Everyone knows the best way to keep bones strong as we age — consume lots of calcium!

Seems so reasonable, right? Bones are made of calcium, so taking calcium supplements or consuming large amounts of calcium-rich dairy products daily seems the obvious route to keeping them structurally sound.

But as H.L. Mencken, our beloved world-weary sage of Baltimore, famously observed, "There is always an easy solution to every human problem — neat, plausible, and wrong."

Gobbling calcium is, indeed, the wrong answer to the bone-health

question, and a classic example of underestimating the complicated, dynamic systems that govern the human body.

Bones are actually made of a complex of minerals — calcium is just one of them — and specialized connective tissue known as collagen.

Consequently, consuming mass quantities of calcium to ensure bone health is a bit like randomly flinging bricks at a decaying building to make it stronger.

What the building actually requires is a coordinated effort in which old material is carefully removed, and skilled workmen add not only bricks, but mortar, rebar, plaster lath, and various other structural components in a careful, coordinated sequence.

As it turns out, most American diets, even bad ones, provide plenty of calcium for bone health. This explains why the relationship between calcium intake and strong bones is actually quite weak. On a country-by-country basis, the populations with the highest calcium intakes tend to have the highest rates of hip fractures in later life.

Why? As it turns out, countries that are sufficiently wealthy to provide abundant dietary calcium to their citizens are also sufficiently wealthy to allow those citizens to lounge around indoors, rather than labor in the sun.

That matters, because when it comes to bone health, here are the two variables that matter far more than calcium intake:

- Vitamin D: The body uses this vital nutrient to create a vital steroid hormone, one that helps regulate the body's ability to use calcium. If blood levels of vitamin D are low, it does not matter how much calcium you consume; your body will be unable to incorporate it fully. You can get vitamin D by eating egg yolks, fish, and liver — all healthy foods — but the way to synthesize it in quantity is to expose the skin to full sun for at least a half-hour a day between 10 a.m. and 3 p.m., when the rays are strongest

- Weight-bearing exercise: The body is a relentless cost-benefit analysis machine. The couch-potato lifestyle persuades your body that the metabolic cost of building bone isn't worthwhile — why, your body wonders, should I bother constructing strong bones for such an inert person who clearly does not need them? Conversely, stressing bones stimulates osteoblasts, specialized cells that make and maintain skeletal strength.

Unlike popping calcium pills, making the two lifestyle changes indicated by this advice will also leave you healthier generally. You'll be better able to resist a wide variety of health problems from cancers to Alzheimer's to cardiovascular conditions.

American health advice tends to incline toward whatever is easy for the consumer and turns a profit for a corporation, hence the success of calcium supplements.

But you don't need them. An hour of yard work in a T-shirt and shorts will do more for your skeletal integrity than any pill.

The Polar Bear Health Secret

The Coolest Thing You Can Do to Improve Your Physical Well-Being

I'm not sure if this is a boast or a confession, but here it is — I am a big fan of immersing myself in cold water, and I never miss a chance to do so.

In my college years, during summers working at Oregon Caves National Monument in southern Oregon's Siskiyou Mountains, I lived in a tent on the banks of Grayback Creek. In lieu of a bath, I lathered up and dunked myself in the rushing snowmelt every morning.

During my years in Maine, I often waded out past the breakers at Popham Beach for a 20-minute breaststroke in the bracing waters.

I now live in Tempe, Arizona, and jump in my unheated pool year-round. No biggie in July, but in January, it's a true thrill.

For decades, I've ended my showers with a 30-second blast straight from the cold tap.

These habits may make me sound unhinged — and some would argue the cheese slipped off my cracker some time ago — but there's method to this particular madness.

CHILL OUT AND LIVE HEALTHIER

First, the subjective effect is simply that a quick, cold plunge makes me feel more alive, plugged-in and focused.

Beyond that, I am, at age 59, in robust health, and a small but persuasive collection of studies in-dicates that my predilection for icy plunges is a major contributor to that happy state.

Perhaps the most compelling evidence of the health advantage of cold-water exposure is a study from England. It determined daily cold

showers boosted the total of disease-fighting white cells in the blood, compared against the totals in people who took hot showers.

Why? Investigators at Britain's Thrombosis Research Institute suggest that when the body warms itself back to equilibrium by ramping up its metabolism, allied body processes accelerate as well — including the immune system's production of white blood cells.

But it appears that these plunges must, like mine, become habitual to provide benefit. A German study found that a single winter swim in cold water simply increases oxidative stress (cellular breakdown, akin to rusting steel). But if the dip happens regularly — at least once a week, for at least five minutes — the body learns to mount a robust response marked by increased levels of glutathione, a potent natural antioxidant. So regular cold water helps us combat the breakdown of tissue caused by oxidation, which, in turn, helps us remain healthy.

Soaking in a cold bath also appears to help reduce swelling and tissue breakdown in runners after long-distance exertions. It may even boost male fertility.

But one of the best effects of cold-water immersion — which also extends to brisk walks in cold winter weather — appears to be improved overall physical condition, including lower weight and increased energy. In other words, it has positive effects almost identical to those of regular exercise. That's because cold exposure activates production of irisin (pronounced I-rissen), a very special kind of hormone.

A 2012 study of mice found that irisin has the near-magical ability to transform white fat — which is metabolically stable and thus tough to lose — into brown fat, which is metabolically active and burns calories. Preliminary human studies indicate the same effect happens in us as well.

GO ON... GIVE IT A TRY

Bottom line: Warm showers, heated swimming pools, and 24-7 thermostatically controlled interiors are probably helping to make developed-world citizens fat and sick.

If you are generally healthy — and, obviously, don't overdo it and risk hypothermia and/or frostbite —one of the best health moves you can make is engineering regular brief interludes of cold exposure either in icy water or frosty air.

Eventually, you may even come to crave it, as I do… Or not.

Either way, it's worth doing.